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PAPERS READ BEFORE THE SOCIETY.

1905-1906.

I.—CAUSALITY AND THE PRINCIPLES OF HISTORICAL EVIDENCE.

By DR. H. RASHDALL.

I.*

As a general rule it may be laid down that the exponents of a Science are the best judges of its methods. It is not the business of the Logician to lay down rules for the guidance of scientific men. In so far as Logic is concerned with the actual methods of particular Sciences, the Logician must rather analyse the methods actually employed in those Sciences up to the present than attempt to prescribe *a priori* the methods that they must follow. While the ultimate principles of thought must be the same for all Sciences and for all departments of human life, there are in a sense special canons of evidence appropriate to particular Sciences. The mind that is steeped in the subject-matter of a Science gets to know the kind of evidence that the Science requires and admits of (however little it may be accustomed to analyse its own procedure), and to estimate that evidence correctly. Each branch of learning has its own methods, and the method can only be acquired by familiarity with the Science itself. A

* I must acknowledge my obligations throughout this paper to Mr. Bradley's *Presuppositions of Critical History*, 1874, though I do not adopt all his positions.

familiarity with the methods of other branches of knowledge than his own may, no doubt, sometimes widen the student's outlook, and serve as a useful corrective to the prepossessions and prejudices which grow out of the exclusive devotion to a particular branch of study. But, generally speaking, the criticism which the professor of one branch of knowledge bestows upon the procedure of another is a useless impertinence.

This last remark is worth making because there are several classes of specialists who are sometimes in the habit of putting in a claim to be considered in some exceptional degree good judges of evidence in all departments of thought. Sometimes the claim is put in on behalf of lawyers. It is forgotten that the enquiries in which the lawyer is engaged deal only with the value of evidence of a particular kind. Evidence in the lawyer's sense is not merely restricted almost entirely to human testimony, but to testimony of a very particular kind, and testimony examined for a very particular purpose. Putting aside the limitations imposed by technical rules, the ultimate canons of a lawyer's estimation of evidence are his unconscious inductions about human character and motive; and human character and motive vary within certain limits in different ages and different countries. A very experienced English criminal lawyer might find himself much at sea if suddenly transplanted to an Indian tribunal; and in the same way a lawyer's judgment of historical evidence is often quite valueless on account of his ignorance of the ideas, motives, and literary habits of the past. A retired police official who has had much experience in the art of detecting the forgers of bank-notes may show himself a mere child when he attempts to deal with the literary forgeries which it is the business of the higher criticism to examine; and no class of men are responsible for more bad history than English judges and barristers. The Court of Queen's Bench, for instance, has solemnly decided that University College, Oxford, was founded by Alfred the Great; while the whole

monstrous theory about a mysterious exemption of the Church of England from the general rules of the Canon Law in the Middle Ages has been chiefly supported by the lawyer's persistent habit of reading back the maxims and ideas of modern English Courts of Justice into an age to which they were quite unknown. In the same way every one is familiar with the peculiar and exceptional incapacity to judge of probability often exhibited by Mathematicians whose training has familiarized them only with certainties; and it may be doubted whether a training even in branches of Physical Science which are less confined to pure deduction from certain premises supplies any particularly valuable preparation for the study of social phenomena. The idea of development which has so profoundly impressed modern ideas about the Universe in general was not really borrowed by the Philosophers and the Historians from the physiological laboratory. It would be truer, if anything, to say that the Biologists learned it from the students of human life and history. The idea of development, and whatever is true in the idea of a social organism, were better understood by Hegel than by Mr. Herbert Spencer; and it is curious to note that Newman's theological application or misapplication of the idea to theological dogma dates from ten years before the publication of the "Origin of Species."

If the student of one Science has no title to prescribe or to criticize the methods of another, still less has the Logician as such the right to prescribe or to criticize the methods of all the Sciences, at least when he is as far off as most Logicians are from the unattainable ideal of the perfect Philosopher who has prepared himself for the study of the Universe in general by an equally exhaustive acquaintance with every department of human knowledge in detail. Speaking generally, the Logician must apply the maxim "*cuique in sua arte credendum*" not only to the results but to the methods of each particular Science. There are, however, two ways in which the study of Logic may, I think, supply a useful corrective to the tendencies

and prepossessions engendered by the study of particular Sciences. In the first place the unphilosophical student of a particular Science may often get beyond the province of his own Science without knowing it; and, when he does so, he is peculiarly liable to apply to the subject a method which has proved fruitful in another Science but which is quite unsuited to that which he has invaded. I am not now alluding so much to the necessary and inevitable abstractness of each and every special Science, the correction of which belongs rather to Metaphysic or Philosophy in general than to Logic, but to the specialist's tendency to encroach upon another specialism without being aware of the fact. When he does so, the Logician may usefully point out some of the considerations which make the estimation of evidence in one department a different intellectual task from its estimation in another. Thus to take up my former illustration, it may be doubted whether the study of Logic would do much—over and above the mental training which every Science can supply—to improve the capacity of a criminal lawyer or Judge for estimating evidence in a Court of Justice; he will not reason better for having analysed the principles which his reasoning involves. But, when on the strength of experience in criminal courts a lawyer claims to be a peculiarly good judge of the evidence for the Resurrection of Jesus Christ, an analysis of the principles which the estimation of testimony involves may lead him to see that the mental and religious environment of the early Christians was different from that in which his own inductive canons of evidence were unconsciously made. The other way in which the study of Logic may sometimes have a practical bearing upon the actual results of a Science is when we come to the questions of degrees of probability. Degrees of probability for the purpose of his own Science it is emphatically the business of the specialist to examine; it is a matter of trained instinct rather than of analysed reasoning to see in which of two rival hypotheses lies the true line of scientific progress; but when

we come to examine the comparative certainty of accepted theories in different branches of Science, the analysis of the ultimate grounds upon which all certainty reposes may tend to correct the exaggerated ideas of the special certainty of his own methods and conclusions which beset the Professor of any special Science when his own results come into real or apparent collision with those of some other Science. The exact degree of certainty which can be ascribed to a particular hypothesis is for the purposes of some special Science a matter of little importance, so long as it is clearly the most probable hypothesis; but, when the accepted theory of one Science is made the ground of questioning the results of some other Science, it may be important to analyse and bear in mind the presuppositions involved in some particular kind of scientific reasoning or in all scientific reasoning, and the limitations which the possible uncertainty of those presuppositions implies. To a large extent this last application of Logic to the criticism of particular scientific results comes to much the same as the first. In both cases it is the tendency of the specialist to go beyond the limits of his own Science without knowing it that may invite and justify the criticism of the theoretical Logician.

• The particular application of these general principles which I have in mind on the present occasion is the question of the possibility of proving events really or apparently inconsistent with the laws of Nature by historical evidence. I have in view two opposite tendencies, both of which seem to me to invite some criticism—on the one hand the tendency of most Philosophers to dismiss without examination and with considerable contempt not merely the so-called “miracles” of past religious history, but also the whole class of abnormal phenomena of the kind investigated by the Society for the Promotion of Psychical Research, and on the other hand the tendency of many Theologians to call upon us to accept some alleged event in the remote past, admittedly inconsistent with the ascertained laws of Nature, on the strength

of the same kind and amount of human testimony which would be sufficient to establish the truth of an historical occurrence of the most everyday and antecedently not improbable character. Here we have, as it seems to me, one of the cases in which our judgment about actual matters of fact which it is the business of various special Sciences to examine may be, must be, and ought to be, affected by the view which we take as to the theoretical basis of knowledge in general.

I proceed then to ask these two questions, which it is important carefully to distinguish—firstly, is a miracle possible; secondly, can the occurrence of a miracle be proved?

A complete discussion of the first question would involve a dissertation upon the whole question of Causality, and a complete discussion of Causality would involve the exposition of nearly the whole of one's theory of the Universe. On the present occasion I can do little more than lay down, almost dogmatically, the philosophical principles which I shall assume, and proceed to apply them to the particular questions under discussion. It is easier to adopt this course at the present moment, because I can now point to recent able expositions of principles more or less entirely in harmony with those which I shall assume, but which, fifteen years ago, it would have been impossible to avow in an assembly of Philosophers without the certainty not merely of misunderstanding but of ridicule. At the present moment the principles in question are still opposed to the dominant fashion in Oxford philosophical circles, but even there they are treated with less contempt than formerly; and at all events outside Oxford they can, I believe, be avowed without danger to one's reputation for philosophical sanity.

II.

It is a commonplace of philosophical criticism to point out that in Kant we have two absolutely inconsistent and irreconcilable theories of Causality. According to one the real

causality of all phenomena is referred to the "thing-in-itself"; according to the other, every event is caused by the event or sum of conditions which immediately precedes it in the time-series. When once the actual conditions—by which expression Kant meant the observable phenomenal conditions—of an event have been determined, it is *a priori* certain that if these conditions are repeated, the same consequence must follow. Yet it is clear that, if the real cause of the whole phenomenal series is the thing-in-itself, and if the thing-in-itself is unknown and unknowable, we have no right to deny that the nature of the thing-in-itself may conceivably be such that the order of phenomenal events might not proceed in accordance with the law of mechanical "uniformity." It might be, for all we know to the contrary, that A might follow B a hundred times and not follow it the hundred-and-first time. The inconsistency has been recognized by the School of Idealists who accepted from Hegel at least his criticism of Kant, if they cannot all of them be regarded as Hegelians in the full sense of the word. With writers like the late Professor T. H. Green the thing-in-itself disappeared—that is to say the thing-in-itself, outside the mind, assumed by Kant to underlie and to be the cause of the events of external nature. When the thing-in-itself was gone, the phenomenal cause alone was left; and it was assumed that Kant was right in regarding the mechanical uniformity of Nature as an *a priori* principle of the understanding. The category of Causality was identified with the Uniformity of Nature; it was assumed to be as inconceivable that the mechanical sequence of an event upon its phenomenal antecedents should be violated as that two straight lines should enclose a space. From this point of view the idea of a miracle—in the sense of an event constituting a violation of, or exception to, a law of physical nature—was of course *a priori* inconceivable. No examination of evidence was necessary; either the alleged event was no exception to the laws of Nature or it did not occur. A miracle, therefore, understood as

an exception to the laws of Nature was *a priori* incredible, and by the laws of Nature were meant "uniformities of succession or co-existence" such as those which prevail in the region of Mechanics.

I venture to hold that this view of the matter represents a great confusion of thought—a confusion between the idea of Causality and the idea of the Uniformity of Nature. That every event must have a cause or sufficient reason is undoubtedly, to my mind, a necessity of thought; nothing can begin to be without a reason why it should begin; that which begins to be, must have its ground in that which does not begin. On the other hand, the law of the Uniformity of Nature seems to me to be no necessity of thought, but (as Lotze put it) a mere postulate of scientific reasoning. Moreover, since the reasonableness of adopting such a postulate must depend upon the extent to which it is found to correspond with the results of experience,—to enable us to predict, and so far (though in a certain very restricted sense) to explain, the course of Nature,—Mill was not after all wrong in saying that the Uniformity of Nature was itself an induction from experience, and an induction not completely made till a very late period in the history of Science. I cannot fully state my grounds for this view. I will only say that they have to my mind been admirably expounded by Professor Ward and by Professor E. A. Taylor. I can only here summarize the points on which I should insist in a fuller treatment of the subject:

(1) I maintain that the idea of Causality is not satisfied by telling me that A follows B, because it always does. I can still ask "why does A always follow B?" Whether the sequence happens once, twice, or a million times, it is quite possible to suppose that it will not do so again. No doubt, if it does not take place again, there will be a reason why it does not take place; though that reason need not always be found in a law of uniform mechanical sequence. So far from the fact of a rational being having acted in a certain way before being a

good reason for his acting in that way again, the idea of mechanical action is *prima facie* the opposite of that of reasonable action. The rationality of the Universe is no proof of uniformity. The difficulty is to reconcile the idea of uniformity with that of rationality. Rational conduct is purposeful conduct, and the very thing which we assume, when and in so far as we postulate the Uniformity of Nature, is that we may ignore purposes, and pronounce confidently that physical events follow physical events, no matter what the ultimate purposes of the Universe may be. The purposes of the Universe might very well be assisted by the body of a Saint becoming incorruptible, though of the same physical composition as other bodies. The very meaning of the Uniformity of Nature is that in deciding about the corruptibility of bodies we may take account only of their physical constitution, and need not bother ourselves about the purposes of the Universe.

(2) I should insist that, while Hume was perfectly right in arguing that in external Nature we can discover nothing but sequence and not Causality, he was wrong in denying that in our own volitions we are directly conscious of exercising activity; and that Berkeley was right in assuming that our idea of Causality is derived from our experiences of volition—or rather, as I should prefer to put it, that we have an *a priori* idea or category of Causality in our minds, which our own consciousness of exercising activity alone in some measure satisfies, and that consequently we are justified in assuming that there is no real Causality except in Spirits. This is a very old position, maintained both by Berkeley and by such now rather despised writers as Hamilton, Mansel, and Martineau. I cannot stay to defend it, but will only refer to what has been written on the subject by Professor Ward,* and by Professor Stout in his admirable chapter on “The Concept of Mental

* *Naturalism and Agnosticism, passim*, especially vol. ii, pp. 180, 191-2, 232.

Activity.”* I may also add that Mr. Bradley, though he cannot by any means be included among the supporters of what may be called the “Volitional Theory of Causation,” may be appealed to in support of it in so far as he recognizes that the true cause of every event is the ultimate nature of the whole, and that Will has as much right as Reason to be considered a manifestation or revelation of the ultimate nature of that whole.

(3) It is sometimes argued that the principle of the Uniformity of Nature is not inconsistent with the admission of miracles: since, if the will of a supernatural being should intervene to cause a violation of some hitherto unvaried sequence of phenomena, that intervention would be a new event or condition, and we shall not have abandoned our principle that, given the same sum of conditions, the same result must follow. Now here I would remark that, if the Uniformity of Nature is to be understood in this sense, it is no longer the principle which Kant understood by his category of Causality or the principle really employed in Physical Science, and it will no longer serve the purpose for which we invoke it as a basis for inductive reasoning. If I throw up a ball in the air a dozen times and it comes down, and then throw it up a thirteenth time and it may not come down, because it is held up in the air by an angel or a devil, then all the boasted certainty of Physical Science disappears. If the “volition of a supernatural being” is to be included among the sum of conditions upon which a physical event is dependent, the principle of the Uniformity of Nature gives me no ground for assuming that a physical sequence once observed will invariably be repeated. Since I cannot possibly ascertain the psychical condition of all the possible spiritual beings in the Universe, I can never say with certainty that, when I throw up a ball in the air under such and such conditions, it will

* *Analytical Psychology*, vol. i, bk. iii, chap. i.

certainly come down again. The principle of the Uniformity of Nature understood in this sense will not serve as a basis for inductive reasoning. What we really assume when we infer the future from the past in the region of Physics or Chemistry is precisely this—that the will of supernatural beings will not interfere with the course of physical events, and that, consequently, I need take no account of spiritual beings or their psychical states, but that, given such and such observable physical conditions, such and such a result will certainly follow. If it is admitted that it is only experience which tells us that angels or devils do not interfere with the course of physical Nature and that God does not interfere in irregular and incalculable ways, it is admitted that the principle of the Uniformity of Nature, in the sense in which it is actually employed as a postulate of Physical Science, is not an *a priori* axiom of thought but is a principle which itself depends upon experience.

(4) I must reply briefly to the objection which will certainly be made by some Logicians. It will be objected to me, as it has so often been objected to J. S. Mill, that if the principle of the Uniformity of Nature is itself only an induction from experience—a mere *inductio per enumerationem simplicem*—we have no logical basis for making it: since all really valid scientific induction implicitly assumes it. I have never seen this difficulty grappled with in the way that I desiderate. I can only reply in a sentence. To my mind the induction by which we arrive at the principle of the Uniformity of Nature rests upon the same principle as any other probable reasoning; and the principle of all probable reasoning is that, when we have imperfect knowledge of a thing, it is reasonable to expect it to behave in the way to which our imperfect knowledge points rather than in the way which we have in experience less reason or no reason at all to believe that it will act. Nature, so far as we have observed, acts in uniform sequences. I shall insist in a moment that it is only within certain very narrow limits

that we do make, or are justified in making, such a generalization; but in the region of strictly Physical Science—in the region of Physics and perhaps of Chemistry—Nature does, so far as we have observed, act in accordance with the principle of mechanical Uniformity. We do, indeed, in making this inference, presuppose the law of Universal Causality. We assume that for every change in Nature there must be a cause, and at advanced stages of scientific development the observed unity of Nature teaches us that the cause of all phenomena must ultimately be one Cause. If we find that all our knowledge of the behaviour of this one Cause leads us to believe that it is a Cause which acts uniformly, while we have no reason for supposing that this Uniformity is ever violated, it becomes infinitely more reasonable to assume and expect that it will act uniformly than to expect the contrary. Such is, I believe, the logical basis of that supreme induction which we practically assume in all purely physical reasoning.

(5) The greatest of all reasons for denying that the Uniformity of Nature is a necessity of thought is the fact that it is a law which within our own experience is constantly violated. Every act of voluntary motion constitutes an exception to the Uniformity of Nature. I am not now pleading for Free-will in the Indeterminist sense. I quite admit that the idea of events not causally connected with the previous state of the Universe is unthinkable; but nevertheless it is not true that our voluntary actions follow one another in accordance with any law of uniform succession. If (like Kant) I had got up at five every morning without a single failure for forty years, that would not prevent my getting up late on one particular morning if it seemed to me that the purposes of my life would be better served by some modification of my usual habits. Human action is determined by final causes: whereas Nature, in so far as it is really determined by the principle of Uniformity, knows nothing of purposes. A rational plan of life requiring me to act in a certain way at one

time and not at another time cannot be included in the idea of a sum of conditions in the sense in which that phrase is or ought to be understood in the formulation of our principle of the Uniformity of Nature.

(6) It will be objected no doubt in some quarters that, though a plan of life or a rational purpose cannot be brought within the idea of Uniformity, yet my psychical state at the moment before action may be treated as a new condition which may vary an observed sequence without violation of the law of Uniformity. I reply:

(a) That to include psychical states among the conditions upon which a phenomenon is dependent is to give up the principle which is actually employed as the postulate of purely mechanical Science. The principle which the Uniformity of Nature really asserts is precisely this—that a physical event is due to the sum of its physical conditions, and those physical conditions only. And that law is violated by our voluntary actions, unless we adopt what I must venture, in spite of the high authorities by which it has been maintained, to call the utterly gratuitous and improbable principle of purely mechanical automatism. It may be asked, why, if you admit that voluntary action interferes with the Uniformity of Nature, the Physicist is justified by experience in assuming that Uniformity at all. I answer, "So long as he has to do with *purely* physical phenomena he is justified in assuming it by experience." The principle rests upon experience, and the limitations of its application depend upon experience also. It is experience which tells us that our psychical states do alter the course of physical nature in the sense of determining whether I shall sit still or cross the room, but that my will is wholly incompetent for a moment to suspend the law of gravitation or of the conservation of energy.

(b) Even if we include the antecedent psychical states among the conditions upon which a phenomenon is dependent, I should insist that it is in the highest degree improbable that

our volitions obey the principle of the Uniformity of Nature. My volition at this or that moment does not depend upon my psychical state at the moment before, but upon my character, and my character is not a psychical state or a succession of psychical states. Much of my character may be unrevealed, even to myself, by any part of my hitherto conscious experience. A new circumstance or even the mere continued effect of old circumstances may suddenly call into action elements of my character hitherto quite unsuspected by myself, by my closest friend, or by my bitterest enemy. If you are prepared to include in your idea of a sum of conditions not merely my conscious state at the moment of action but the whole of my character, even those tendencies of it which have hitherto found no expression in my conscious psychical states, I do not deny that you might possibly bring human action within the sphere in which the Uniformity of Nature prevails, but then you will take a still further departure from the idea of Uniformity as that term is applied in purely Physical Science. You will have practically made it equivalent to the Law of Causality, and the Law of Causality, as I have already pointed out, will not serve as a basis for the inductions of Physics, or supply us with any *a priori* reason for rejecting the idea of miracle. If human spirits may modify physical sequences, so might the psychical conditions of angels or devils. It is experience and not any *a priori* necessity of thought which leads us to assume in Science and in common life that the human will may, within certain limits, move tables and chairs about, but that angels and devils do not.

(7) I must add that it is not only within the sphere of human action or even of conscious animal behaviour that the Uniformity of Nature is constantly violated. It seems to be more and more recognized, both by Biologists who know something of Philosophy and by Philosophers who know something of Biology, that the action of organisms—even of vegetable organisms—can only be explained by the action of final

causes which wholly refuse to conform to the principle of mechanical Uniformity; that the growth of a plant from moment to moment is determined not merely by the observable physical state of the plant at the moment before, but by what the plant is to become. That the category of Organism could not be reduced to that of Mechanism is a principle which was laid down by Hegel long ago; but it seems to have been strangely ignored by those Hegelians who assume that the law of mechanical uniformity is a necessity of thought. I am glad to see that this has of late been recognized by such competent exponents of Hegel as Dr. McTaggart and Mr. Haldane. If it is a necessity of thought, it must prevail in all departments of Nature. It is surely no *a priori* principle but experience which tells us that stones and earthquakes behave in accordance with the principle of Mechanism, while trees and men do not. The principle of Causality is no doubt a necessity of thought, but as to what kind of Causality prevails in different departments of Nature or in what way the supreme and ultimate Cause acts in those different departments we are dependent upon experience. It is true no doubt that, if a tree grows in a certain way, that must be due to something in the tree: if by "condition" we mean not an observable physical fact, or even a psychical fact, but a mere tendency to become something, we might bring the kind of Causality observable in Biology within the formula "Uniformity of Nature": but a mere tendency or, as it is sometimes metaphorically styled, "striving," cannot be regarded as a "condition" in that sense of the word in which the purely Physical Sciences assume that every event is determined by the sum of its conditions. Once more, if you admit that Biology cannot be reduced to Mechanism, either you give up the Uniformity of Nature as an *a priori* necessity of thought or you understand it in a sense in which it will no longer serve as the postulate of inductive inference in Physical Science.

III.

And now what is the application of these principles to the matter in hand—the Logic of historical evidence? On the one hand, if the Uniformity of Nature is no self-evident axiom, we have no right to say that a miracle in the strictest and most old-fashioned sense of an exception to a well established law of Nature is *a priori* an impossibility. How anybody should suppose that miracles were *a priori* incredible when till recently the ablest and most clear-sighted of men found no difficulty in believing them, I have always found it difficult to understand. It is not because our speculative insight is greater than that of Berkeley or Leibnitz, but because of our altered ideas on the subject of historical evidence that we find difficulties in this matter. So far, then, I agree with the orthodox conservative Theologians. It would be reasonable to believe a miracle on sufficient evidence. It is when we come to the nature of the evidence required to establish a miracle, that I feel obliged to dissent from the position taken by many Theologians who are otherwise quite reasonable and open-minded. They do not seem to me to appreciate the pre-suppositions implied in all reasoning from historical evidence. Particularly is this the case with some of the English scholars who give themselves to critical studies. They are fully alive to the difficulties arising from corruption of texts, composite documents, disputable dates and the like; but when they have established the fact that a certain event is recorded in a document sufficiently near the time of the alleged occurrence to establish some ordinary non-miraculous event, they treat it as a sort of treason to historical evidence to question it because it is miraculous. They talk as though the evidence for what we call a fact could be isolated from the whole mass of our experience, and estimated by itself alone, as though the evidence for a fact could be estimated without reference to the nature of that fact. A very little analysis of the actual

procedure adopted by historians will show that this is not the case. Every historian rejects some statements of some witnesses not because the documentary evidence for them is less than that of other facts which he accepts, but because of the intrinsic improbability of the fact deposed to. And these estimates of probability are based upon a mass of inductions—for the most part unconsciously made—as to the way in which men actually behave. The more obvious of these inductions are based upon the ordinary experience of life. We gather from accumulated experience of our fellow-men that people do not act without motives; that, though they are often inconsistent, their inconsistency has limits; that people are not good judges of matters in which they have a strong interest; that statements made shortly after the event are apt to be more accurate than those made at a later period; that wilful lying is not unknown, and that unconscious bias is still more frequent; that a story repeated from mouth to mouth generally grows in the telling, and usually becomes more dramatic, more romantic, and more interesting rather than the reverse. Some of these inductions are based upon experience of human nature in general; others upon more detailed experience of human nature at particular times and places. This is what gives its especial value to the judgment of the historian whose mind is steeped in the history and literature of a particular period. From an immense accumulation of evidence he arrives at conclusions about the reliability of different statements which the acutest observer of human nature in general could never discover by the closest scrutiny of the isolated evidence for a particular fact. The comparatively modern art of historical criticism has grown up partly through the closer attention which specialists have bestowed upon particular periods or departments of history, partly through the enormous extension of the area over which these inductions about human nature can now be made.

It is particularly about periods and countries very remote

from our own that this change has taken place. Modern historians are not better judges of the evidence for facts alleged to have taken place near their own time than Thucydides or Tacitus were about the events of their times. It is when they came to deal with what was probable or improbable in times and places very unlike their own that the historians of the eighteenth century, for instance, were so hopelessly at sea. Assuming that the literary habits and modes of thought of the biblical writers were just like those of their day, the older theological or anti-theological writers supposed that there was no alternative between accepting all that they found in the Bible as literal fact or rejecting most of it as deliberate imposture. It is this ignorance partly of the particular facts in question, and partly of parallel facts, that often makes the judgments of experts surprising even to very acute minds not specially acquainted with the matter in hand. Because it is difficult in a modern work of two joint authors to distinguish what is the work of one from what is the work of another, because a prolific journalist will sometimes fail to recognize even his own style in a forgotten article, it seems improbable that the modern critic should be able to assign the first half of a verse in the Old Testament to the priestly chronicler, and the second half to JE. The expert judges differently, because he has found that the literary compositions of ancient Jewish chroniclers were more heavily charged with characteristic expressions, constantly repeated formulae, mannerisms of thought and mannerisms of representation than the works of the modern leader-writer; though it is possible after all that a life-time spent in the study of the "Times" might succeed, there too, in discriminating the work of different writers and detecting the corrections of Mr. Delane or Mr. Buckle. In other cases even very minute students of a particular set of phenomena may fail from lack of acquaintance with parallel phenomena. Our eyes have been opened to the possibility of growth and expansion in the early

narratives of Christianity through the observation of a closely parallel development in the narratives of the Buddha, of St. Thomas of Canterbury, of St. Francis of Assisi. I will not multiply illustrations of these familiar points. They are fairly generally recognized in principle by modern theological scholars, even the more conservative of them. But what I want here to insist upon is that among the presuppositions implied in our estimation of historical evidence are not merely certain inductions as to the way in which human beings behave, think, and write, but also certain inductions as to the way in which Nature behaves. I do not think some of our theological Apologists recognize how completely the regularity of the course of Nature is assumed at every turn in the estimation of historical evidence. What we regard as sufficient evidence for a fact would cease to be any evidence at all but for that assumption. A prisoner is said to have proved his *alibi* when a reputable witness says that he saw and conversed with him at the time of the alleged crime in another place. Deny the Uniformity of Nature, and the evidence is worthless. The accused may have been in two places at once, or the witness may have been the victim of a purely subjective delusion; it was not the accused but his "astral body" or something of the kind that he saw and talked with; or his memory may have failed beyond the extent to which experience shows that human memory does fail, and he may have simply imagined with perfect *bona fides* the interview which he records, or be under the influence of something like hypnotic suggestion without having been actually hypnotized. In this way it may be shown that the alleged evidence for an exception to a law of Nature really assumes it all the time; the argument is an argument in a circle. Consequently, except where theological prepossessions intervene, every historian rejects at once not merely facts which are contrary to established natural laws, but even alleged facts which are in

themselves highly improbable, no matter how strong the testimony in their favour.

An interesting illustration occurs to me. In the absolutely contemporary and transparently honest account of the Martyrdom of Polycarp, it is related that, when the fire failed to do its work with sufficient promptitude, the executioner humanely stabbed the aged Bishop, and then out of the wound there came "a dove and abundance of blood" (*περιστερὰ καὶ πλῆθος αἵματος.*) The acuteness of the late Bishop Christopher Wordsworth of Lincoln was able to detect a textual corruption which had transformed *περὶ στύρακα* (a very rare word for "spike" or "haft") into *περιστερὰ*. It is obvious that the flowing of the blood and the appearance of the dove rested upon exactly the same documentary evidence (though it is true that the suspected words are omitted in a quotation): it was the unusualness of the latter occurrence which led even so credulous and uncritical a scholar as Bishop Wordsworth to suspect the text, and which would have made most people reject the alleged fact even if the destruction of the few Greek authors who use the word *στύραξ* had made it impossible for the acutest of scholars to explain the growth of the legend.

The difficulty of proving an exception to a natural law really goes further than this. It is not merely our judgment of the value of a deponent's evidence which pre-supposes the Uniformity of Nature: even what the witness says that he really saw and heard is partly inference based upon a host of presuppositions. Nobody ever saw a fact. What an observer says that he saw or heard always contains an immense mass of inference. I say that A was present in the room during the whole of my interview with B. It is highly^{*} improbable that I looked at him the whole time. I assume he was present because my inductions about the behaviour of corporeal bodies lead me to believe that he could not have got out of the room without escaping by the door or the window—a movement which I could not have failed to observe, had it occurred. I say that I saw

such and such an individual: what I really saw was a certain visual appearance which I infer from experience to accompany the other characteristics of his person. But I did not actually see his back, or ascertain by experiment that he was impenetrable: I inferred he was solid from my previous experience of the connexion of a certain visual appearance with a solid body. Or perhaps I did actually touch him; but it was only by inference that I knew that a certain tactual feeling accompanies the pressure of an impenetrable body. Then again I touched him, but you did not: it is only by inference that I know that if you had been there, you could have touched him too. Once admit the possibility of exceptions to the regular course of Nature, and no visual or tactual appearances will testify to anything except those particular visual and tactual appearances themselves. It is probable that the discovery of an inferred element in what were commonly regarded as simple facts of perception might be carried much further, but I do not wish to get myself into the region of difficult and disputable questions of Psychology: and I therefore forbear to ask how much inference there is in our perception of distance, in our estimates of magnitude, and the like. I have said enough, I hope, enough to show that sufficient evidence for a completely isolated fact is practically unobtainable. All historical reasoning presupposes that facts are not isolated and disconnected, but that we may assume certain constant relations between our experiences. What we call facts are not simple immediate experiences, but experiences organized and interpreted in the light not merely of the categories of thought but of a vast complex of other experiences.

I may be asked "then what becomes of your admission that you could accept a miracle if only it were proved by sufficient evidence?" I answer:

(1) I admit that, *a priori*, an isolated experience might occur, but an isolated experience could never be understood, could never be put into its context or explained. We might

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be aware of some experience which refused to fit into the rest of our knowledge. It would be quite right not to deny that experience, but we should have to limit ourselves very severely to the experience itself. If I found what had a moment before tasted like water to taste like wine, I should be justified in asserting, "This tasted like wine"; on sufficient evidence I might be justified in inferring that to others, too, it had tasted like wine, but that it was wine would be an inference for which there would be no logical basis. I will not press the point that "wine" means something that was once contained in a grape, which *ex hypothesi* the transformed liquid never was, and so on. That seems to me a subterfuge, based upon a latent Nominalism; all I assert is that, in the case supposed I could not pronounce how many of the properties possessed by what we commonly call wine was really possessed by this liquor which I had tasted. Even if the fact of the changed taste were proved, it would require immense knowledge of the course of Nature to enable me to say that the taste of wine could not be separated from the other properties of it without a suspension of natural law.

(2) If we admit that our belief in Uniformity is based upon experience, it must be conceded that sufficient experience would justify our belief in non-uniformity. But this sufficient evidence would be practically unattainable in the case of an *isolated* miracle. I fully admit that if experience which refused to fit in with the hypothesis of Uniformity crowded in upon us with sufficient frequency, we might be driven to the assumption that Nature was not uniform. If this experience of non-uniformity were sufficiently overwhelming, if we habitually failed to trace any regularity in the course of things, if we habitually found that everything behaved anyhow, we should be deprived of all basis for inferring the future from the past—nay, we should not, properly speaking, possess knowledge at all, since all knowledge implies a certain organization of our isolated experiences, the logical basis for which would then be wanting. But, if we had no knowledge,

it would be wise to acknowledge the fact, and simply to say we have such and such experiences, and that is all we know. It may be, indeed, that we should be unable to describe or communicate to others these isolated experiences without assuming a certain amount of that very uniform connexion between their experiences and ours, or between different experiences of our own which the hypothesis in question denies. But it is, no doubt, quite an intelligible hypothesis that there is a general rule (as it were) in the phenomena of Nature, but that such a rule is liable to very frequent exceptions. That is, indeed, what Aristotle actually supposed to be the case—at least with regard to phenomena deeply “immersed in matter” like those of Biology, for instance. On this supposition all our generalizations must be held to be true merely *ὡς ἐπὶ τὸ πλεῖστον*. And at a certain stage of knowledge it was quite reasonable to adopt such a position. The rough generalizations made by popular experience or primitive Science did appear to be subject to numerous exceptions—exceptions which might not, without plausibility, be ascribed to the interposition of a god or a saint. In truth, the belief in occasional violations of the laws of Nature is more logical, the

- greater the frequency with which such exceptions are believed to take place. The early Christian Bishop who kept a diocesan registry of miracles or the devout modern Catholic who believes that, under certain conditions, miracles are matters of daily occurrence, have a much stronger logical position than the modern Protestant or Anglican, who believes that miracles were confined to Judæa and stopped at the end of the first century. It is the accumulating experience that, under certain conditions, miracles were always believed to occur, but on closer scrutiny of historical evidence or closer contemporary investigation are found not to occur, which has compelled critical scholars enormously to restrict the sphere of miracle—to give up all miracles, perhaps, except those of the New Testament, and to weed even those. But the fewer the

miracles believed in, the greater is the difficulty of proving that they are not due (like thousands of other recorded miracles) to misunderstanding at the time and the exaggerating influence of subsequent tradition. Where many miracles are believed, the evidence for each confirms the evidence for all; where few are accepted, each miracle rejected increases the amount of evidence which ought to be required for those which remain. The difficulty of proving a miracle reaches its maximum when it is believed that miracles have been worked at only one period in the history of the world, perhaps only by one person during that period. It is contended, no doubt, by conservative Theologians that the unique character of that crisis in the religious and moral history of the world destroys the pre-supposition against, and even creates a presupposition of, miracles in connection with this exceptional crisis. That is reasonable enough as far as it goes: only it rests with the advocate of such a view to show that there is any real reason for suspecting that a unique moral and religious turning-point in history should be accompanied by physical marvels, apart from the actual tradition which associates the new moral and religious revelation with physical marvels.

(3) All that I have been saying rests upon the assumption that miracles are to be considered as exceptions to physical laws. I have for convenience spoken so far as though the Uniformity of Nature prevailed all through Nature. But I would now venture to recall your attention to the doctrine which I defended at the beginning of this paper—that not only is the Uniformity of Nature no necessary law of thought, but that it is a law which, as a matter of experience, actually does not prevail except within certain very restricted limits. It may be said that, if we once admit exceptions at all, we are in just the same position as those who say frankly that there are exceptions even to the best established physical laws. I reply that just as it is experience which is the basis of our belief in the Uniformity of Nature in so far we do believe

in it, so it is experience which tells us how far and within what limits it prevails. To formulate the extent to which purely physical laws are as a matter of fact interfered with by the operation of forces not purely physical, is a difficult task which I am not well qualified to undertake; but some Physicists of great eminence would not object to the statement that the direction of physical forces can be altered by the human will, but not their amount. At all events, it is a matter of ordinary experience that so long as no mental or biological phenomena are concerned, physical laws prevail without exception, and that in the biological region the modification of physical forces is restricted within well-defined limits—that, for instance, I can walk across the room but cannot fly, that I can voluntarily lift weights but only to the extent of the energy contained in my body, and so on. The ways in which, and the extent to which, these physical laws are capable of being interfered with are capable of being stated and defined in a general way; and such general statements may be regarded as laws, though such laws cannot (as I have here contended) be identified with mere uniformities of succession. We may, indeed, say that the reign of Law prevails everywhere, but, if so, we must not identify the expression “Law of Nature” with the idea of mechanical uniformity of succession. All experience goes to show that, though physical laws are violated or (as some would prefer to say) superseded or modified by laws which are not physical, they are only superseded or modified in certain regular and restricted ways. And any formulation of the extent and kind of this interference may be called a law of Nature. Biological laws are, no doubt, in the present state of Science not capable of being stated or defined with the accuracy which is possible in the case of the physical laws which really do observe the principle that like physical conditions are followed by like physical consequents. But still we are able to formulate them to some extent. We do not know, it may be, exactly in what

way the growth of a plant is determined by the ever-operative tendency or striving after its completed growth; but we do know a good deal about the growth of plants; and that enables us to say what alleged occurrences can be brought within the conception of biological law and what would be, if actually established, exceptions to all biological law. We can say, for instance, that individual plants may vary to some extent from the specific type: we cannot define exactly how much they may vary, but we can say confidently that thorns will not grow into vines or thistles into fig-trees. It is true that when we use the word law outside the region of Physics and Chemistry, we use it in a somewhat vaguer sense than we do in those Sciences. We do not know all the laws of Physics and Chemistry in detail, but we do know the general type of law which prevails, and that type is not inadequately expressed by the old formula "uniformities of succession or coexistence." But in Biology we have not got even an exact conception of the kind of law that prevails. We have to be content with such a vague statement as that the mode of action which prevails there is capable of being reduced to some kind of regularity, some rule, some principle—though the rule or principle is one which cannot be reduced to a "uniformity of succession." The general rules are of a kind which admit within limits of a certain uniqueness of character in individuals, which perhaps could not conceivably be reduced to any principle more general than this—that this individual constituted in such and such a way has a tendency to behave in such and such a manner.

In ordinary cases we have little difficulty in determining the limits within which an alleged event in the biological or psychological sphere may be regarded as one that may have occurred without any violation of natural law. We have no hesitation in accepting the statement that the course of a stream was diverted by human agency; accounts of a Saint's levitation we reject, in spite of much testimony in its favour,

because an overwhelming mass of evidence convinces us that gravitation is not a law which is capable of being interfered with by any of the forces known to Biology or Psychology. It is a biological fact that the will can move our limbs; it is a biological or physiological law that we cannot suspend ourselves three feet from the ground without mechanical support. But there is a large intermediate region of alleged phenomena the actual occurrence of which is still a matter of dispute among men of Science. The unwillingness of men of Science to believe in the marvels of Hypnotism, Telepathy, Second-sight, and the like springs largely from the fact that their admission tends to modify not merely our conception of what in detail the laws of Nature are, but the very conception of what is meant by natural law in the sphere of Biology and Psychology. I have not studied any of these disputed phenomena in detail, and am anxious to avoid crude or hasty statements as to what has been or is likely to be established. I will only say that it seems to me that the facts generally admitted have already modified to a considerable extent our ideas as to the kind of law which prevails in the psychological region, and have modified it in a non-materialistic direction. Still more would this be the case if we accepted such results of psychological research as are accepted by so sane an investigator as Professor James. By modifying our conceptions in a non-materialistic direction I mean that they have not merely tended to show that the laws of mind are other in some details than they were supposed to be, but have emphasized the enormous difference between the kind of law which exists between physical law and the laws of mind. They have increased the difficulty of identifying the laws of mind with mere uniformities of succession, and constitute an emphatic warning against the rejection of alleged occurrences because they cannot be made to fit in with a mechanical conception of natural law.

IV.

I will now endeavour to sum up the conclusions at which we have arrived in the form of positive canons of historical evidence.

(1) For practical purposes it may be said that, if an alleged event would constitute a real exception to ascertained laws of Nature, it must be rejected as too improbable to be proved by the kind of testimony which is usually adduced in favour of such events.

(2) We must, however, beware of confusing the prevalence of law with the mechanical Uniformity of Nature. Causality prevails in all regions of Nature: the mechanical Uniformity of Nature is the law only of Physics and Chemistry. In certain directions it is well ascertained that purely physical laws are not modified or superseded by the operation of biological or psychological forces: in other directions the kind of law which prevails in Biology and Psychology and the relation of such laws to the laws of Physics and Chemistry are much less perfectly understood. Hence, while an alleged historical event which would contradict a well-ascertained law, whether of Physics or Biology, must be rejected, we must be much more careful in the latter region of disbelieving a recorded event because it does not fit in with our present views either of what these laws are in detail or of the kind of Causality which prevails in this region.

(3) While the idea of "law" or "order" does not necessarily imply uniformity of succession or of coexistence, it does imply some constant relations between different parts of Nature. Hence the hypothesis of a completely isolated or unique event incapable of being reduced to any rational plan or order or system is one which the historian ought to reject, not because it is *a priori* incredible but because sufficient evidence for it could not from the nature of the case be obtained. So long as the event is wholly isolated, the

probabilities of fraud, mistake, exaggeration, mis-description or the like would always be too great to be overcome—I will not say by any conceivable accumulation of historical evidence but by any historical evidence which ever is produced for occurrences of the kind which I have in mind. The case is, however, very different when it is not an isolated event—irreducible to any law or principle—that is alleged, but whole classes of events recorded to have occurred at various periods of history, especially if they are alleged to occur still, and so are more or less capable of scientific investigation. These events ought to be accepted if proved by a sufficient amount of testimony, even though we cannot at present detect or formulate with exactness the conditions under which such phenomena occur. The canon that consistency is the test of truth is true enough as far as it goes, but it requires to be understood with some limitation. If it means merely that no testimony could compel us to accept an alleged event which violated the law of contradiction or some other necessary law of thought, it is of course wholly true. If it means that an alleged fact must be accepted or rejected in accordance as it does or does not fit in with the whole system of Nature, as we at present understand it, the proposed test of truth is obviously but a half truth. It is *a* test but it is not *the* test. If a new fact refuses to fit in and make a piece with the existing ordered fabric of our knowledge, one of two things must be the case: either the alleged fact is not true or our conception of the laws of Nature—not merely, it may be, in detail but our general conception of what a law of Nature is, or of the kind of Causality which prevails in Nature—requires some modification. To accept every alleged fact, however little consistent with the law which we have based upon other experience, would be the negation of all Science, for Science consists in correcting particular observations by wider observation: to reject every apparent fact which we could not at the moment reconcile with our present con-

ceptions of natural law would be to shut the door to all scientific progress. To adopt the first principle would involve the acceptance of all the miracles of the *Acta Sanctorum* a consistent application of the second would have justified at the time the rejection of Copernicanism, Newtonism, Darwinism: for these new modes of thought modified not merely men's conception of the laws of Nature in detail but their very notion of what natural law means.

(4) There results from these general principles the following canon of historical evidence as regards events of an abnormal kind, not obviously capable of being accounted for by known and formulated physical law. Such events ought to be accepted or rejected partly according to the amount of direct historical testimony in their favour, partly in accordance with the probability of their being accounted for in some way not at present ascertainable by the existing laws of Nature or by some laws of Nature not at present ascertained. And this probability depends mainly upon the extent of the analogy between the event in question and other events independently established, and more or less completely understood or explained.

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V.

To attempt to apply these principles to any particular department of religious or other history would clearly lead me beyond my limits, but for the sake of clearness I may add a few illustrations of the way in which these principles would work. If the illustrations may seem very obvious, I may remind my hearers that I am not professing to maintain any original thesis, but merely to analyse the way in which most of us actually think in the estimation of historical evidence or the evidence for alleged occurrences in ordinary life. In the abstract it is always possible to suggest that an event could be accounted for by unascertained laws of Nature, but practically we know enough about the Universe to be sure that for the

sun to stand still in the heavens at the prayer of a man, for the walls of Jericho literally to fall down at a shout, or for water to acquire instantaneously the properties of wine would involve a suspension of those physical and chemical laws which we have every reason to believe to be unmodifiable by any biological or psychological law. We should therefore be justified in rejecting such alleged occurrences even if they rested upon the strongest historical testimony. Some biological laws are practically as well ascertained as those of Physics, *e.g.*, the law that asses are incapable under any circumstance whatever of human speech. That there is no unknown law in accordance with which a man or other mammal could be born without preceding sexual intercourse may, I suppose, be regarded as almost equally certain. Practically any amount of historical testimony to such an occurrence may therefore be safely set aside; a contemporary account of such an occurrence conducted as the result of a scientific experiment by competent and trustworthy observers might certainly call for fresh investigation, but would certainly not be accepted—even provisionally—till the observation had been many times repeated. On the other hand narratives of appearances of the dead or the dying to their friends, of impressions conveyed from one mind to another without physical contact or speech or visible sign, of visions of future or distant events, and the like stand in a totally different position. Not only is the evidence for such events in past as well as recent times continuous and persistent—sufficient in the case of second-sight to convince thinkers so sceptical as Schopenhauer and von Hartmann, but the admission of such facts would involve no interference with any physical or chemical law, except in the sense that ordinary thinking and willing go beyond, and so far modify, the operation of ordinary physical or chemical laws. The historian will therefore not do well to reject all such alleged occurrences as due to mere delusion or mere imposture—still less to make the frequent Teutonic mistake of supposing that

narratives of such occurrences can only have been written long after the date to which they are referred. As to cures affected by spiritual impression, they are not only not known to be contrary to ascertained law, but are entirely in accordance with well-ascertained psycho-physical law. The limits within which such cures can take place are no doubt not well understood. The ordinary narratives of the cure of nervous disorders—paralysis and the like—there is no need to look upon with any particular suspicion, though both present and historical experience suggest the possibility that the cures are often less complete or less lasting than the narratives represent. In proportion as the alleged cure departs from the recognized type, the probability of the event and the amount of testimony required to establish it becomes greater. The cure of some forms of blindness by such means is for instance 'less incredible than the restoration of an amputated ear. The raising of an actually, in the scientific sense, dead man could hardly be accepted on any amount of historical testimony in the absence of skilled scientific investigation; the raising of one in a state of coma, and therefore apparently dead, would involve a far smaller extension of well-established knowledge as to the power of mind over matter. Still less out of harmony with well-established facts is the appearance of the dead or the dying to their friends. The Stigmata of St. Francis of Assisi and the speaking of Confessors whose tongues had been cut out may be mentioned as among the best proved historical facts which recent investigation of analogous phenomena has removed from the category of incredible events.

VI.

To insist on the bearing of these principles upon Religion and the Philosophy of Religion is no part of my present task. I would venture, however, briefly to suggest three directions in which they tend to modify our attitude towards the common belief in Miracles.

(1) It is obvious that if these principles are accepted, there must be much greater uncertainty about the whole matter than was commonly assumed in former times both by credulous Apologists and by sceptical assailants. Unless and until we acquire an enormously extended knowledge of psycho-physical law, a rough estimate of probabilities is all that historians can hope for. Even when it is ascertained that an alleged event is possible without a violation of natural law, it does not follow that the event occurred; for, however much we admit the possibility of real faith-healing and the like, there is no less room for the operation of the well-known psychological causes which tend to produce belief in such events even when they have not occurred.

(2) In proportion as these exceptional occurrences are regarded not as exceptions to but as instances of natural law, their religious significance must be considerably reduced. They can no longer be regarded as evidence for the truth of the doctrines promulgated in connexion with their occurrence. The relative uncertainty in which criticism conducted on our principles leaves the matter tends of course to the same result. Whatever the attitude of Religion and of Philosophy in the future towards the question, it may be safely said that the main evidence for Religion in general or for any particular Religion will not be sought in any such events, however well they may be thought to be established.

(3) On the other hand, it by no means follows that the religious value of such abnormal occurrences, if accepted, will be altogether destroyed. At the very lowest, the adoption of the attitude which I have advocated will tend seriously to diminish the breach of continuity between the Religion of the past or the present and the Religion of the future—to bridge over the gulf between the Religion of the Philosopher or critical Theologian and the Religion of the popular mind. It is a gain to the cause at once of Religion, of progress, and of charity if we are able to recognize more truth than was admitted

at the first outburst of criticism in the traditional religious history of Christianity, though we may no longer rest its claims chiefly or primarily upon any such historical events. Moreover, though the significance of the particular events may be diminished in proportion as they are recognized as illustrations and not as violations of natural laws, yet the laws themselves of which they are illustrations, may be of great value. I have already remarked that the whole tendency of recent extensions of our psycho-physical knowledge makes in an anti-materialistic direction—tends to widen our belief in the influence of mind over matter and of mind over mind, and so to counteract the popular Materialism which results, however illogically and unphilosophically, from a knowledge of the undoubted dependence of the individual mind upon material processes. To what extent our knowledge may carry this anti-materialist tendency, to what extent it may, for instance, be possible to get evidence for the immortality of the individual soul from well-established appearances of the dead or dying, I will not now discuss, beyond saying that at least in the present state of knowledge it seems to me personally that the ground of that belief must be sought mainly or wholly in ethical considerations. But every advance of knowledge which tends to widen our conception of the influence of the human mind over matter, to show that Nature is not in all its departments mechanical, tends also to confirm the conclusions which Metaphysic arrives at in a very different way as to the necessity for a spiritual explanation of the Universe as a whole. For a trained Metaphysician metaphysical and ethical considerations may seem more trustworthy than histories based on abnormal and comparatively rare psychological phenomena in the remote past or even in the present; but it will be a gain if it shall come to be understood that the positive Science which the popular mind trusts so much more than it trusts Metaphysic can, to some extent, be appealed to in support of the religious tradition which the religious mind is disposed to trust more than it trusts either metaphysical or physical Science.

II.—TELEOLOGY.

By SHADWORTH H. HODGSON.

PERHAPS I may be allowed to say at the outset that I should be glad if the present paper were taken as a sequel to be read in connection with that paper on "Reality" which I had the honour of reading before the Society two years ago, and which will be found in its *Proceedings*, vol. iv, N.S., 1903-4. In that paper I gave what seemed to me the only philosophical proof possible of the real existence of Matter, by showing the process of thought operating upon sense-data, by which our conception of real objects which were not consciousness, but which were conditions of new states of consciousness coming into existence in our own experience, was originally and unavoidably forced upon us; a process whereby our conception of Reality in the full sense was shown to depend on our conception of real matter, instead of our conception of real matter depending on an *a priori* conception of what reality might be expected to be. It is this process which first gives meaning to the terms *real* and *reality*, as terms importing something the existence of which is independent of the existence of a finite consciousness perceiving it.

I.

Consciousness is a self-objectifying process, that is, a process the immediately perceived content, or immediate object, of which is consciousness itself and nothing else. In what is called an empirical present moment of consciousness, say, for instance, the pain of a sudden scratch or prick of a thorn, the pain is felt in being objectified and objectified in being felt. It is, of course, only sundered from its context in the stream of

consciousness by abstraction, for our present purpose of thinking about it; we don't analyse in simply perceiving, we don't break up the stream of consciousness into *minima sensibilia* in simply being conscious; to do that is the work of apperception. In simply being conscious we are not even aware that it is consciousness and nothing else of which we are aware, for in simply being conscious there is nothing else with which to contrast consciousness, or from which it can be distinguished; nor is the perceived content distinguished from the fact that a content is perceived; that also is the work of apperception; the distinction between them lies as yet undetected in the content.

The pain in the present instance has a certain, though very brief, time-duration, failing which it would not be felt, or objectified, or exist, or be a content of consciousness at all. The time-duration of an empirical moment of consciousness is an essential element in it, equally essential with its qualitative sense-content, the pain in our present instance. And this time-duration it is which gives it unity, makes it *one* thing, *one* empirical moment of consciousness, at the same time that it makes it a *process*, and connects it with other empirical moments of consciousness, whether simultaneous or successive, every one of which is subject to the same analysis. The discreteness of the time-duration common to all empirical moments of consciousness composing the stream is due, not to any difference in the time-duration, but to differences in the qualitative sense-contents, to all of which one continuous time-duration is common. That is to say, time, or time-duration simply, is no concept or general term in thought, having under it a number of particular times, either simultaneous or in succession, which constitute its meaning; but all difference or particularity of times is due in the first instance to difference in the sense-qualities of the content, which, together with their co-element of time-duration, are the lowest empirical moments of consciousness.

And in ultimate analysis of consciousness in its lowest terms no other *means* is conceivable than its element of time-duration, or than the additional element of spatial extension in the case of geometrical and physical phenomena. I say no other nexus is *conceivable*, because the continuity of time-duration in all cases, and the additional continuity of spatial extension in geometrical and physical phenomena, are already included as elements in any conception which we can form of a synthetic action or synthesis (which is the Kantian ultimate in knowing), whether it be a synthesis of sense-qualities, of elements, or of parts, or of aspects, or of empirical moments of consciousness. Synthesis, in fact, presupposes discreteness, and every synthesis must itself be conceived as having time-duration, just as the *discreta* which it synthesises have. To exist for no time-duration is not to exist at all. There can, therefore, be no synthesis of what is known only as continuous; there can be no synthesis between the beginning and end of an abstract time-duration. Now, in ultimate analysis, both time-duration and spatial extension are found only as *continua*, that is, as continuous elements in consciousness. The time or duration element is common to all modes of consciousness, and therefore it is that I call consciousness in its entirety a *process*, and refuse to regard it, or any mode of it, as an *action*. There is no *agency* discoverable by analysis in the immediately perceived content or object of consciousness. In other words, consciousness does not immediately objectify or reveal itself as agency or action or activity of any kind, and therefore still less as an agent, material or immaterial, of such agency, that is, as the Subject of itself as a knowing, the Subject of its own content as Object. The place of the Subject to which action belongs is taken, in my system of thought, by the proximate Real Condition of consciousness, the knowledge of which as a reality is derived solely from the content by an inferential process.

The foregoing analysis of the ultimates of consciousness and method of analysing, now once more stated, are what I oppose

to the prevalent view of philosophical method founded on the *a priori* assumption of a Mind or Ego as Subject. In the first place, I hold that this latter view does in fact, whether tacitly or overtly, assume that we are immediately aware of an entity or substance of which consciousness is an attribute, or an agent of which consciousness is an activity. I, on the contrary, maintain that we have no such immediate awareness, and therefore that to assume the existence of such a substance, entity, or agent, is unwarranted as an initial assumption. In the second place, I maintain that, supposing the assumption warranted, and an immediate awareness of the Mind or Ego shown to be a fact, the assumption can only be or have been warranted, and the immediate awareness shown to be a fact, by analysing the content of consciousness without making the assumption,—which is in fact to follow the very method of analysing which I have advocated. Thirdly, I hold that this method by initial assumption of a Mind or Ego has been tried and failed, both in the hands of Hume and in the hands of Kant. With Hume it led to what I may call the *atomising* of the Universe, our knowledge of it coming to us originally in separate perceptions without nexus between them. With Kant it led, when fully worked out by his successor, Hegel, to the idea that the Universe is nothing but the Mind which thinks it,—an idea which is futile as an explanation, so long as the initially assumed Mind remains unaccounted for and unexplained.

But since we undoubtedly have the idea of conscious action, as a common-sense idea, and of ourselves as conscious agents,—all reasoning, choosing, analysing, and philosophising, being instances of such conscious action,—the double question at once arises, What sort of an idea is this idea of action, and what its origin? And first as to the idea of it;—what do we know it as,—in what does our consciousness of it consist? We have seen that we have no immediate knowledge of it, that it is not among the immediate *data* of the stream of consciousness. From which of these *data*, then, or from what combination of

them, does it arise? The answer must, I think, be this. The idea of action originates, that is, arises in the first instance, in a certain feeling called afterwards the sense of effort, attaching to what we afterwards call the act of attending to a content of consciousness with what we afterwards call a desire, or a purpose in view, were it only the purpose of perceiving that content more clearly. Neither of these factors, neither the desire or the purpose or expected result alone, nor the sense of effort alone, gives the idea of action; both are empirical contents (as yet unnamed) in the immediately perceived stream of consciousness; but together they give us the idea of conscious action. I mean that the sense of purpose, desire, expectation, taken alone, is not the sense of action; action is not its objective aspect, is not itself over again as object: neither is the sense of effort the sense of action: as immediately perceived, it is perceived not as effort, but as a specific sensation and nothing more. Suppose, however, these two senses (of effort and of purpose) combined by some synthetic process, and we get the idea of conscious action, the idea of effort for a purpose, as the object or objective aspect of their combination. A new idea, the idea of conscious action, has been formed for the first time in consciousness, an idea the formation of which has probably proceeded *pari passu* with the formation of our idea of ourselves as conscious beings, the psychological Subjects of consciousness.

But as to what effort *per se* is, what action *per se* is, in short, what agency hypostasised is,—of this the two components tell us nothing, our idea of action tells us nothing. We can perceive and describe action in two ways only, either subjectively by our knowledge of it as purpose and sense of effort, or objectively by the change which it is said to effect; we can never catch it, so to speak, in the act of acting, so as to perceive its nature as *action*. And the like must be said of consciousness itself, the process of being conscious: we cannot, so to speak, catch it in the act of being conscious, apart from

the content which the process of being conscious objectifies ; its process *per se* is nothing but the time-element in its content ; there is no such thing as pure consciousness, or consciousness *per se*, without a content. Its *content* (not its action) is the subjective aspect of consciousness, its aspect as a knowing ; while the *fact that* a content is perceived (not its action as perceiving) is its objective aspect, or aspect as an existent.

Consequently, all that we can legitimately mean, in ultimate analysis, by any term implying *agency*, such as action, force, energy, influence, power, is the *fact that* such and such events do occur in such and such ways, a fact which enables us to distinguish and classify what we call the various forces of nature and kinds of matter or of ether, and to ascertain their laws, but must not lead us to hypostasise those agencies as separable realities, or to treat them as in any way explanatory of the real events from which their laws have been ascertained. To hypostasise them as realities would be to make them into Things-in-themselves, totally unknowable simply because totally fictitious.

The dynamic character of the whole known frame and course of Nature, when we have formed this idea, and the ceaseless change of which it is the seat, are thought of as universally present facts in all that we can think of as Existent, but they are not ultimate facts in the analysis of Knowledge as distinguished from Existence. It is for the original formation of our idea of Nature, as a world of Real Existents which are not consciousness, that I would refer to my paper on "Reality" which I mentioned at the outset. The analysis of our knowledge of the frame and course of Nature, that is, the analysis of our subjective panorama or subjective aspect of Existence (a panorama which consists of objectified consciousness, and itself belongs to the frame and course of Nature as the conditionate of some real existent or existents which are not consciousness), goes farther in one sense, and is more searching, than the analysis of the Being or Existence

which is the Object of that panorama, or of any particular Object which it contains. For as an analysis into distinguishable but inseparable elements and aspects of knowledge, which cannot be thought of as existing separately, it is exhaustive of the whole nature (in the sense of *whatness*) of its object analysed, namely, our knowledge. But this very fact shows how infinitely short our knowledge falls of furnishing an exhaustive analysis of the Real Beings or Existents which compose the frame of Nature. We may indeed distinguish abstract elements in them, incapable of separate existence, but no such abstract elements, whether elements of knowledge or elements of real existence, are capable of being thought of as independently existing; still less, therefore, as first existents in order of genesis and history, which is the *course* of Nature. It is a logical contradiction to imagine them as concrete objects. The concrete is always questionable, always requires explanation, because our knowledge of it is always analysable. And it is of concrete objects, whether these be empirical states or moments of consciousness, or material or immaterial existents which are not consciousness, that the frame and course of Nature are composed.

• The existence of the material world, therefore, including the forces which it displays, and the existence of knowledge, including the fact that its content changes, but contradistinguished from the specific *whatness* of the contents subject to that change, are facts belonging to the order of genesis and history, as distinguished from that of content, *quiddity*, or *τί ἐστίν*, from which alone our knowledge of the fact of change can be derived. Specific content in consciousness is prior to, and an element of, perceived change in order of knowledge; change in concrete objects, not being consciousness, is prior to and conditions the arising of any specific content of consciousness in order of existence. And it is owing to this last-named priority that we can never think the thought either of an absolute beginning or First Cause of all things,

or of an absolute end of all things, or Cessation of Existence. For in both directions, time-duration being at once indispensable and inexhaustible, we are driven to enquire for some further specific and concrete content, to furnish a reason explaining the existence of whatever specific and concrete content we may at any time have attempted to conceive as an absolute first or absolute last existent. An absolute beginning or an absolute end of all things is not strictly a thought: it is an attempt at thinking which fails. But why or how fails, it may be asked;—what is meant by failing? Its failing means, that the conception which it aims at and names, an absolute beginning or end, being obtainable only by disregarding an element (namely, time-duration) which is essential to the content of all consciousness, of which thinking itself is a mode, brings thinking into antagonism with itself, or, in other words, is a self-contradictory conception, a conception which is not conceivable. There is no contradiction in consciousness: the contradiction lies in the attempted conception of an Absolute.

It may be compared to the attempt to think the thought of a *Thing-in-itself*, that is, an existent which is not an object of consciousness, an unknowable *a parte rei*, which attempt fails because, the content of consciousness being the only evidence we have of the existence of anything, it follows that nothing, not even consciousness itself, can be thought of but as an object of consciousness. That is to say, you cannot hypostasise the objective aspect of consciousness *per se*, separately from the subjective. Thinking of it at all is objectifying it. Without their subjective aspect the terms Being and Existence would be terms without a meaning, would have literally no content. Thus the former attempt at thinking is frustrated by the inseparability of the *elements*, formal and material, of consciousness; the latter by the inseparability of its *aspects*, subjective and objective; both inseparabilities being discovered by analysis of consciousness.

And here I would add, that the distinction now once more signalised, between the nature or content of consciousness (which is our only evidence of the nature or existence of anything whatever) and the existence or genesis of consciousness in conscious beings,—or more briefly, between the two aspects of consciousness, first as a knowing, secondly as an existent,—is the only possible escape from the puzzles in which Idealism involves us, when it is regarded as a Philosophy, and involves us in virtue of the truth which it undeniably contains, namely, that consciousness is the only *evidence* of anything whatever. We are, in fact, brought to a deadlock whenever we try, in any shape or way, to think the thought, that existence depends upon consciousness, and not consciousness upon existence; as, for instance, when we try to think, either that the real existence of perceived objects is identical with the perception of them, or that it in any way depends upon the real existence of the perception of them, instead of *vice versa*. True, the perception of physically real objects, though imperfect, is first in order of knowledge: but the real existence of that perception, however imperfect it may be, is conditioned upon the prior existence of those real objects (of course in connection with others) in order of genesis and history. No one can think, consistently with the rest of his experience, that the sun shines only when and so long as he perceives or thinks of it as shining. No. What we really do, and what experience compels us to do, is this. We infer the existence of real objects, alike in the past, the present, and the future, not from the existence but from the content of our present consciousness, the existence of which depends, as we also infer, upon the existence (among others) of those imperfectly-known objects. •

But now to come a step nearer to the special theme of this paper. It is in the character of rationality, which we seek for in natures other than ourselves because the seeking for it is an irresistible tendency in our own natures, that the idea

of there being a Final Cause, or Final Causes, in Nature has its origin. It is a common-sense idea, founded on the conception of ourselves as conscious agents, and arises independently of the metaphysical analysis of that conception. It does not exclude, but on the contrary implicitly contains, the common-sense idea of agency or efficiency. In ourselves, a final cause is an idea which is not yet realised, but which we desire to realise, and which as desired, or the desire for which, is the motive of action. For us, its rationality lies in its preferability, in the fact of our desiring its realisation. It answers the question *Why?*, when this question is put to any conscious action of our own, and makes that action a rational one. And this is prior to, and not dependent on, the question whether the desire, the momentary preferability of the motive, is or is not in accordance with what we may call right reason, that is, with what a true judgment would approve. So far, then, that is to say in its origin, and as applied to our own conscious action, the idea of Final Cause belongs to the practical as distinguished from the speculative reason, or rather to reasoning itself when considered simply and solely as conscious purposive action, abstracting from the purpose of increasing or correcting our knowledge of reality or fact.

But in speculative reasoning, that is to say, when we reason with the purpose of discovering truth of fact, apart from that of realising particular desires of our own, then the final cause of the reasoning lies solely in this single and general desire; the preferability of any one particular desire of our own ceases to be the source of the rationality of our conscious action; and on the contrary the rationality of one alternative conception or thought becomes the source of its preferability, in recommending it for adoption as the best representation within our reach of the truth of fact. In what, then, does rationality itself consist? What makes reason right reason, as opposed to the realisation of capricious desires? What feature in reasoning is it which makes Reason itself rational?

The answer seems to me to be this. Rationality is the correspondence of part to part, factor to factor, element to element, feeling to feeling, aspect to aspect, and so on, in our total panorama of consciousness or knowledge, every particular content of which is relative more or less directly to the rest, and more or less directly requires the rest in order to being what it is, and occurring when and where it does occur, both in order of time and in that of space. Correspondence I call it, not similarity; but rather mutual adaptation, as socket corresponds to ball, and ball to socket, in a ball and socket joint. The ideal completeness or realisation of Rationality would be Truth, the complete and perfect knowledge of fact, of reality, of existence,—the subjective aspect of Being. There is, as we have seen, no knowledge of Being at all, but through its subjective aspect, the distinction between the subjective and objective aspects of everything being drawn, in the first instance, by apperceptive consciousness, within its own objectified content, appearing therein as the distinction between the content and the fact of consciousness, and thus affording a basis (founded in ultimate analysis) for inferring the reality of existents other than consciousness from the content of consciousness, which is thenceforward known as the subjective aspect of all existence, including that of consciousness itself.

The search for rationality in the frame and course of Nature therefore means, that we cannot stop reasoning till we have discovered, in the objects presented and represented in our subjective panorama, the laws which make those objects a connected and harmonious whole, a total in which every part exists, more or less directly, *for the sake* of the rest, and the harmony of which exists *for the sake* of harmony in the subjective panorama, which is what we call our motive or the final cause of our conscious action in reasoning. But we, our own consciousness, and our own conscious action, are also included as constituent objects of that objective total. In reflecting on them we find that our consciousness, with its inherent and essential distinction

between its inseparable objective and subjective aspects, is itself a concrete object, a concrete existent, among the other objective existents presented and represented in the panorama, and therefore in its own subjective aspect, or in the thought of its own content as a Knowing. We thus have before us our own panorama and its several parts as existent objects and, as existents, separate (and not merely distinguishable) from the other existents which compose the frame and course of Nature, which are its presented or represented objects. A separation, and not merely a distinction between inseparables, takes place in thought between our knowledge and the things known. And in thus thinking of our knowledge or panorama as a concrete existent or group of existents, we drop or tend to drop out of view the distinction between its own subjective and objective aspects, I mean the inseparable aspects contained within itself as a process, though at the same time we know well, on reflection, that our knowledge of its nature as a self-objectifying process, in which the distinction (without separation) between its subjective and objective aspects is essential, is the only ultimate source of our knowledge of its existence, as it also is of our knowledge of all other existences.

But here observe the extreme importance of the mode or step of thought which has just been described. For in thus thinking of our own consciousness as a particular, concrete, objective, existent process, in the objective total of existents and existent processes, we are no longer thinking of it solely as the subjective aspect of Being or Existence in its totality, or as a knowing simply, but as a particular consciousness or conscious process, the existence, order, and combination of whose states, sensations, memories, imaginations, emotions, volitions, thoughts, reasonings, and so on, are subject to laws of real conditioning which hold them together as an individual reality or real person, and enable or rather compel us to think of them, and therefore of the consciousness which they compose, as the function or functions of a real existent, the Subject of

Psychology. We thus pass insensibly,—I mean by dropping out of view the distinction between the objective and subjective aspects within the process of consciousness simply,—from the metaphysical to the psychological analysis of consciousness, Metaphysic being directly concerned only with the analysis of its nature or content as a knowing, and Psychology with the analysis of its nature as the function of a real Subject or Conscious Being, together with the discovery of the real relations which connect that real Subject with the whole frame and order of Nature, of which it is a part, and upon the existence of certain other parts of which its own existence immediately depends. Our philosophical conception of the Psychological Subject is thus the conception of the real condition, or group of real conditions, upon which our own or any particular consciousness proximately depends for its genesis and support, its maintenance and development. And the question concerning the nature of that real condition, or group of real conditions, is the first and fundamental question to be answered in psychological theory.

Nor can we avoid recognising the existence of this question in Philosophy. For in obedience to that tendency in the conscious action of reasoning to seek for correspondence and harmony in the total of existent objects presented or represented in our subjective panorama, in which correspondence and harmony the Rationality of that objective total consists, we have as a matter of practical necessity to ask, Upon what kind of object or objects in the objective total, other than itself, the genesis or existence of our own consciousness depends. And in seeking an answer it is of no use to have recourse to the fact of the inseparability of the two aspects, subjective and objective, in our own consciousness, in the hope of imagining thereby an universal Conscious Being, in which or in whom the two aspects are correspondent and adequate each to each in all their parts. The complete correspondence between the subjective and objective aspects of the Universe is indeed

legitimate as the Ideal of Rationality above described, but as an answer to the question now stated it would involve an *ignoratio elenchi*, being an attempt to answer a question concerning the relation between conditions and their conditionates, which are particular real existents within an objective total of real existents, by alleging an inseparability of aspects which applies solely to the nature or content of consciousness as a knowing; a fact which is indeed necessary to our subjective panorama of existence, but without affording aid to the solution of the question of the truth or untruth of the details of that subjective panorama, that is, of the reality or unreality of the particular existents which are pictured therein.

The subjective panorama, the objective aspect of which is Being or Existence generally, in which infinite regions are a blank, is a very different thing from the subjective panorama positively imaginable by any particular Psychological Subject, notwithstanding that the latter panorama shares in the nature of all consciousness, namely, its distinction, within its own content, between its subjective and objective aspects. The inseparability of aspects subjective and objective in consciousness as a knowing is one thing; the inseparability of elements in concrete contents or objects of consciousness is another: and the constant connection of real conditions and conditionates (commonly spoken of as causes and effects) where that relation exists, is another. All three relations are objects of that Rationality which we are concerned to discover, but the discovery of one is not the same thing as the discovery of the others or either of them. In philosophy, therefore, while we cannot but recognise the necessity and importance of this fundamental question concerning the Real Conditioning of particular consciousnesses, we leave its solution, or rather the framing of hypotheses leading to a solution, to the Psychologist.

It will be evident also from the remarks in the two preceding paragraphs, that the answer to the fundamental psychological question as to the genesis of particular or

psychological consciousnesses, supposing it attained, and in whatever it might consist (a question with which, as already said, we are not now concerned), could furnish no answer to the question now before us concerning the existence or the genesis of that Rationality in the objective total, the Existent Universe, which is the object of our own subjective panorama. For it would involve transforming that which *ex hypothesi* is a conditionate, I mean some particular consciousness or other, into the condition of that upon which it *ex hypothesi* depends, I mean the objective Universe, which also *ex hypothesi* must be conceived as already rational.

There are moreover two further circumstances which render it impossible to build a speculative theory of the Universe upon the idea or conception of Final Causes, a conception which, as we have seen, attaches originally to our own reasoning as a conscious and practical action, taken prior to analysis. The first of these circumstances is, that any action of our own from final causes, or what we call motives, is always analysable into two actions which are efficient simply, the motive (which is consciousness) acting on the conscious agent, and the conscious agent re-acting on his own consciousness, which two acts together make up what we call a single act of choice, that is, an acting *from* a motive or (same thing) *for* a purpose, as I have tried to show in a paper headed "Time and Design in Nature," to be found in the *Proceedings of the Aristotelian Society*, vol. iii, N.S., 1902-3, pp. 66-67. The second circumstance is, that such action from final causes must assume an efficient action on the part of consciousness *per se*, for which there is no evidence in the analysis of consciousness.

But the question must be asked and answered, and here is the place for doing so, What is the justification for retaining the conception of action from final causes or motives as a logically valid description of our own unanalysed conscious action, a description from which the conception of Teleology

was itself derived, when our analysis shows its total unfitness to serve as a foundation for a speculative theory of the Universe? What truth can it possibly retain, when thus robbed by analysis of its explanatory virtue? Does it not cease to be true even as a description of our own unanalysed conscious action?

The answer to these questions, an answer which, I think, justifies the truth of the conception of Teleology (though not of Final Causation as an efficient agency), both in our own conscious action and in the Universe, is given, as it seems to me, by a consideration of the two following points: The first, which shows the validity of the conception of End or *τέλος* as a bare conception, is this. The whole of consciousness as such, the whole subjective panorama of consciousness, is itself the End or *τέλος* of whatever in the objective total, or the existent Universe, is not consciousness; there is no *value* in anything which is not consciousness; whatever *value* anything has, including the conditions which give rise to consciousness, is derived from the consciousness which it or they condition. *Value* is a word without meaning save as a word of consciousness, everything else exists *for its sake*; there is no beyond, *for the sake of which* consciousness itself exists. And this applies both to our own consciousness and to any conception which we can form of consciousness, that is to say, to an universal consciousness, as well as to that of any particular being. Consciousness as a knowing is not only the sole evidence, but also the sole End or *τέλος*, of Being and Existence.

The second point shows, not only why we are wrong when we attribute a speculative or explanatory virtue to the conception, but also how it comes that we are ^{so} falsely led to do so. Consciousness, though it is the universal End or *τέλος*, does not include the conception of efficiency, or causal agency, or motive power. It is as distinguished from efficient agency that it is an End or *τέλος*. At the same time we readily

fall into the error of attributing efficiency to it, which would make the conception of it as *τέλος* an explanatory conception, by the fact that, in being conscious, or consciously active as in reasoning, we are never immediately conscious of the proximate real condition of that consciousness, seeing that our knowledge of that condition and of its existence is arrived at only by a reasoning process, which we may call inference, whatever the nature of that condition may be, whether physical or psychical, material or immaterial. We know consciousness immediately, but its real condition only by inference from immediately known contents of consciousness. Analysis however, both metaphysical and psychological, shows that both elements or constituents are really present in being conscious. So that, prior to philosophical analysis, we implicitly include, in our idea of conscious action, the real activity upon which it proximately depends as its condition, without distinguishing it from the consciousness, taken as a knowing simply, by which alone we know or can describe it; and we think of ourselves as single conscious agents, or active consciousnesses, without distinguishing the constituent elements of the conception from each other. The idea of the *Ego*, a common-sense idea, is thus arrived at, namely, by treating as *one thing* what we afterwards come to know as two things, though closely connected, as condition and conditionate, with each other; an identification which, however natural, and indeed inevitable, in the history of human consciousness, is nevertheless a perennial source of fallacy and contradiction, inasmuch as, speaking as we invariably do from the point of view of the *Ego* as a Knowing, we tend (until corrected by analysis) to conceive Knowing as prior to Being in order of real existence, as well as in order of knowledge of existence, which of course it really is. Here, as it seems to me, was Kant's fundamental fallacy. He wanted to make necessity in pure thought prior to existence *in order of existence*. The two orders, moving in opposite directions, cannot without

hopeless confusion in thought be thus imagined as a single order moving in a single direction. It is only *at infinity*, which as a limit no finite thought can think, that they can be identified.

Our conclusion must therefore be, that analysis justifies us in forming and retaining our common-sense conception of the Ego, and attributing to it action from final causes, so long and only so long as we abstain both from analysing the Ego and its action, and also from treating it, though unanalysed, as if it were an ultimate unanalysable fact, affording a basis for speculative theory; or in other words, so long as, and in whatever relations, we are content to think and speak of *ourselves* as concrete conscious beings, without troubling ourselves with philosophical analysis or speculation.

The practical bearing, and I think I may say the importance, of this conclusion will be evident, when we reflect, that the ideas embodying Religion, and the language expressing those ideas and the religious feelings which they embody, are common-sense ideas and common-sense language, in which the reality of Persons and Personal relations is assumed, not only without analysis, but also as excluding the thought of analysis, so long as those feelings and ideas are dominant in consciousness. In short, the metaphysical analysis of our ideas of Persons and Personal relations no more shows Persons and Personal relations to be unreal, than the metaphysical analysis of our ideas of Matter and a Material World shows Matter and a Material World to be unreal; both these classes of ideas belonging equally and alike to the order of common-sense ideas formed prior to philosophy, and being among its *explicanda*, and explicable by us just so far as our philosophy can reach and no farther. The question is, How far, and What or Where is the arresting limit?

Now a knowledge of the constituent elements, with their relations, which compose our idea of a Person, is no more a knowledge of the mode in which real Persons are constructed,

than the knowledge of the constituent elements, with their relations, which compose our idea of Matter, is a knowledge of the mode in which real Matter is constructed. Our science and our philosophy alike fall short of making these modes known to us. In short, our analysis goes farther than our knowledge of construction. This would be different if we knew how the inseparable elements of consciousness, formal and material, came to be combined in consciousness, or how consciousness itself came to be a process, or how, without pre-supposing physical real conditions, visual and tactual perceptions came to be conjoined in experience, thus giving us our knowledge of real Matter. We can analyse consciousness and its objects in thought, but we cannot put together in thought the members which analysis discloses. We have thus to be contented with the *fact that* real Matter and real Persons are constructed; but their construction is the work of the whole frame and course of Nature, including its unseen as well as its seen regions, the key to which construction is not given to us either by such knowledge as we have of its nature or of its real existence as a fact. If we knew the *nature* of what we call *agency*, of that which acts or does or makes anything, it might give us such a key, for that would *pro tanto* be a knowledge of Construction. But this, as I have shown above, we know not. In short, we know not the law or laws of real conditioning in the real Universe; we have not got the law, but only the fact, of the real Universe itself; but the fact of the real Universe, and therein the fact of real Matter, and the fact of real Persons,—these are facts which we have got, and they are facts which no ignorance of the law or laws of real conditioning can justify us in treating as unreal.

II.

But now to return to the assumption of Rationality in the objective total, or the Existent Universe, the discovery of which in its details is the End or purpose of our own specula-

tive reasoning. Is the assumption of its existence in the objective total or Universe an unwarranted assumption? By no means. What would be unwarranted is, that a reasoning analogous to our own is the efficient agency, affording *pro tanto* a theoretical explanation, of that assumed rationality. The warrant for the assumption of rationality is the fact, that the assumption arises in, and is bound up with, the exercise of our reasoning powers, the exercise of thinking, from which it is shown by analysis to be inseparable. Its contrary, irrationality, which we may call Chaos, or Chance, is in fact inconceivable, one of those attempts at thinking which fail, a thought which is literally unthinkable.

Now all thinking, in detailed operation under the Postulates of Logic, involves the belief (possibly momentary only) of the attainability of a purpose, namely, a better knowledge of the object-matter thought of.* Attaining that purpose, however, depends (just as believing in its attainability depends) upon the operation of real conditions in the objective total. The objective total must therefore be conceived, not only as rational, but also as a rational process, that is, as a process in which there is correspondence and harmony between its past, present, and future states, and in which the future will be better than the past. This last-named property in the objective total, namely, its being a *progress* from a worse state to a better, is the objective or existent counterpart of Teleology, as its property of correspondence or harmony in general is the counterpart of Rationality. And the conception and assumption of Teleology in the existent Universe is thereby justified, as part and parcel of the conception and assumption of its Rationality in general. ¶ Teleology is, if I

* See on this point Professor William James's admirable essay, "The Sentiment of Rationality," in the volume entitled *The Will to Believe, and other Essays in Popular Philosophy*; also his address, "Reflex Action and Theism," in the same volume, published by Longmans Green & Co., 1897.

may speak figuratively, the dynamic aspect of Rationality ; just as Uniformity in the Course of Nature is the dynamic aspect of the Uniformity of Nature taken generally.

Now, with the correspondences and harmonies discoverable in those operations upon which our consciousness, including the sequences and co-existences of its states, immediately depends for its genesis and continuance, that is to say, with what we may call its proximate real conditions, we are not now concerned, any more than we are now concerned with the nature and laws of the rest of the objective Universe, exclusive of consciousness. It is with Teleology as we find it in our own consciousness that we have now to do, not with the efficient action which subserves and realises it ; that is to say, with the Teleology of our own subjective panorama, not with that of an Universal Conscious Being, or Omniscience (supposing it conceivable), nor with that of the efficient action which subserves and realises either our own or an imagined universal subjective panorama. Only it must be said that, whatever efficient action we should imagine as subserving and realising either such an Omniscience or such an universal panorama, we must also think of as at once its object and its real condition. But of the nature of such efficient action, *qua* power, agency, or action, we could know of course no more than we do of the nature of action *qua* action when ascribed to ourselves, or to objects positively known to us. In both cases the name expresses the *fact that* such and such events do occur, such and such objects do exist, when and where they do so. Facts *qua* facts are our ultimates ; there is no possibility of conceiving either an abstract Power, or an abstract Reason, which is prior to Fact. To conceive them they must themselves be conceived as facts, that is, as concrete objects in which other elements are included. And so to conceive them is *ipso facto* to bring them under the general distinction of inseparable aspects, subjective and objective, which is the fundamental distinction in all knowing.

Even Plotinus, whose whole cosmological system, like that of Plato and that of Aristotle, is teleological, has to treat his transcendent and ineffable One, the transcendent source of all things, as an object. It is transcendent because, as such a source, it is beyond all Being and all Knowing. It is ineffable because it has no predicates. Yet first he has to identify it with Plato's *τὰγαθόν*, "which in reality is above good (*ὑπερέγαθον*)" (Whittaker's *The Neo-Platonists*, p. 69). Next he has to devise some special mode of apprehending it, his much-spoken-of "ecstasy." Again to quote from Mr. Whittaker's extremely valuable work, chap. vi, p. 103, "The One and Good, which is the first principle of things, is beyond thought. If it is to be apprehended at all, and not simply inferred as the metaphysical unity on which all things necessarily depend, there must be some peculiar mode of apprehending it. Here Plotinus definitely enters upon the mystical phase of his doctrine. The One is to be seen with 'the eyes of the soul,' now closed to other sights." The One of Plotinus, then, as it seems to me, is the supposed purely abstract object of the supposed purely abstract activity in thinking,—two abstractions fallaciously hypostasised as concrete entities. His mysticism is a supposed knowing of the fictitious "Thing-in-itself."

I have thus attempted to show that Teleology, being part and parcel of Rationality, is a conception the truth of which is as firmly established when we base our philosophy on the analysis of experience simply, as it can ever be when we base it on *a priori* assumptions, however self-evident, because familiar, such assumptions may appear. The *prius* from which they are derived can be nothing else than some common-sense notion or notions, which themselves stand in need of analysis. You cannot begin your philosophy with an assumption and prevent that assumption appearing in your resulting conception of the Universe, and rendering it hypothetical. Such methods, compared to those built simply on experience

and its analysis, may indeed promise more, namely, a theoretical or speculative comprehension of the Universe, but they perform less, because by their initial assumption, whatever it may be, they *ipso facto* narrow the Universe to something which can be grasped, at least in its principle, by human thought. To grasp in thought the principle of the Universe is an attempt at thinking, which the analysis of experience shows must ever fail. Infinity and Eternity are inseparably involved in the ultimate data of all our consciousness as a knowing; they are names for the *continuity* of Space and Time, its formal elements; and they for ever preclude us from forming a positive conception of any object adequate to fill them, because positively to conceive any object is *co ipso* to conceive it as limited and finite.

It is not the place here to criticise any one of these *a priori* assumptions, or the systems founded on them. What I have now to do is to consider briefly our own subjective panorama, as I have ventured to call it. The fundamental and therefore the dominant fact in this consideration of the panorama is the difference between the specific qualitative elements of consciousness *qua* qualities and the fact of their occurrence or existence as objects of consciousness. As *qualities* they are modes of awareness which are not conceivable as dependent upon any cause or real condition; while, as *existents*, that is, as parts in the consciousness of some particular conscious being, they are necessarily conceived as so dependent. Why? Because as existents they are parts of a continuity of time, or in some cases of time and space together, both continuities being themselves known as specific qualities, the formal elements, of the states of consciousness themselves. Time-duration and spatial extension are at once both specific qualities in the content of states of consciousness and the *neens*, because *continua*, between states of consciousness, in which latter capacity they are one original basis of our conception of causality or real conditioning. The formal elements in our consciousness, namely, time-duration and

spatial extension, are specific qualities in consciousness in precisely the same sense as the feelings are which we call *their* content, or *its* material element. They are ultimate constituents of it in the same sense, distinguishable and therefore nameable, though inseparable from the consciousness which they contribute to constitute.

It is true that these formal elements of consciousness, time-duration and spatial extension (each in its own domain), are also elements common to consciousness and its inferred real objects which are not consciousness,—a feature which establishes the *nexus* between these two classes of existents. But this does not destroy their specific quality as formal elements of consciousness, and in this respect they escape being accounted for, just as surely and completely as do the specific sense-qualities of its material element. Make the attempt. Try to assign a reason, or a cause, or a real condition, for either the formal or the material elements being *what* they are, that is, for their nature as specific elements, and you will find that you fail. No reason, cause, or condition, not pre-supposing them, is conceivable.

There are thus three distinct points in the analysis of consciousness to which I wish to call special attention, as well as to the necessity of considering them in combination, as they are combined in the consciousness analysed. The first is the distinction between the nature or content of consciousness and the fact that the content is perceived, or in other words between the elements and the aspects (subjective and objective) of consciousness, the elements becoming the subjective aspect of whatever is perceived. This distinction between the content of consciousness and the fact of its being perceived is the ultimate ground and warrant in analysis for proceeding in philosophy by means of the distinction between nature and genesis, as a principle of method. The second point is, that the time-element in consciousness is common to the content and to the fact of existence of consciousness, that is, common to its elements and to its

aspects, subjective and objective. The third is the point which I have just now been insisting upon, namely, the *non-causability* of the specific elements of consciousness whether formal or material, considered in their nature or whatness alone. *These are ultimate *data* in consciousness, the *whatness* of which cannot be brought into connection with the idea either of causation or of real conditioning, except as pre-requisites for the formation of those ideas.

The importance of this analysis will, I think, be evident. In the first place it necessitates the substitution of the conception of real condition in place of that of cause, whenever we attempt an intelligible construction. But on this point I can only briefly and incidentally touch, as will presently be seen. In the next place—and here we come upon teleologic ground—it entirely precludes us from inquiring for a reason, cause, or condition, for any and every form of pain, suffering, or evil, whether sensuous, intellectual, or moral, considered solely as specific qualities. It precludes us because the attempt to think the thought of a real condition of a *whatness*, as distinguished from its *real genesis*, is an attempt which fails, the two ideas being heterogeneous, and is one of those false starts in philosophy of which we have already had several instances. These qualities, simply as qualities, are, like all other elements of consciousness, ultimate data, just as are all forms of pleasure, satisfaction, and good. The real conditioning of all alike, and of their resulting combinations, that is, their genesis or existence in particular consciousnesses, is all that can legitimately be enquired into. Differences between specific qualities, being differences in value, are what enables the question Why? or What for? to be put. Consequently it can be put only concerning the existence or genesis, the sequences and combinations, of the qualities in particular experiences, not concerning their nature as specific qualities. We cannot ask, why they are what they are, but only why, being what they are, they are permitted to exist, or prevented from existing, in particular consciousnesses, why the

Course of Nature favours or forbids their occurrence in experience.

And even here the teleologic answer, the answer to the question, *Why?* must be sought within the subjective panorama, in states or processes of consciousness, not in the real conditioning of those states or processes, or among their real conditions whether proximate or remote. The subjective panorama in its entirety is indeed the End or *τέλος* of the whole frame and course of those real conditions which are not consciousness, but it is only in its entirety that it is so, including all forms of evil as well as all forms of good. The preferability of one set of real conditions compared to another set is derived from the preferability of its conditionate, the consciousness which it conditions or contributes to condition, apart from which the term *preferability* does not apply to it, but is a term without meaning.

It is therefore within consciousness itself, within the subjective panorama of the objective total, and in the harmony or correspondence of its parts, that the answer to the question *Why?* must be sought; and the whole structure and course of development of the subjective panorama is teleologic, being rational, and it is in that same harmony that Truth also consists, which is the ideal End of speculative reasoning, as Goodness is of practical. It is with Goodness that we are concerned in Teleology. Truth and Goodness cannot be sundered in Reasoning, since reasoning as an action includes" both, as inseparable elements. But in Teleology it is with feelings rather than with thoughts that we are concerned. Thus the sense of desert is a specific quality of feeling, and teleologic; it is a sense of what ought to be; as, for instance, when we say, that a good deed deserves reward; guilt deserves punishment; one good turn deserves another; promise requires performance; love is only satisfied when reciprocated by the beloved; and, generally, anticipation expects fulfilment. No cause can be conceived for the nature of the specific sense of

correspondence, of what ought to be, that is, of desert. This sense must be assumed as a specific datum, a teleologic relation between the specific feelings themselves, and inherent in them as such. But the idea of *cause* implies that the nature of ultimate feelings and of their relations *inter se* can be accounted for; whereas all that we can account for is their occurrence, genesis, order, and combination. This, however, is the idea of their real conditioning, as distinguished from that of their cause. Specific feelings no doubt arise from the combination of others which are more elementary; but the specific quality of the more complex feelings so arising is not thereby accounted for.

Briefly expressed, the result of this analysis, in its bearing on our present subject, is to break up the heterogeneous conception of Final Causation or Real Design in Nature, and transfer its Finality, that is, its Rationality or Apparent Design, to the *nature* or *whatness* of known or knowable existence, as distinguished from the *genesis* of known or knowable existents. And Teleology is the name by which this finality, rationality, or apparent design, may most suitably be denoted. It is found to be inherent in the *nature* of consciousness, of experience, of existence. It is cut loose from the question of the efficient causation or the real conditioning of phenomena, with which it was bound up by the conception of Final Causation, in which that of Efficient Causation was tacitly included.*

• And this result involves another of great importance as it seems to me, namely, that it reduces to utter insignificance, from a philosophical point of view, the much-debated question as to what is the real proximate condition or mechanism of consciousness,—is it physical or psychical,—is it Matter or is

* See on these points the section on "The Basis of Teleology," in my *Philosophy of Reflection* (1878), Book III, Chap. XI, § 3; Vol. II, pp. 245-253; and the sections, "Design in Nature" and "Apparent Design," in my *Metaphysic of Experience* (1898), Book II, Chap. III, §§ 2 and 3; Vol. II, pp. 340-348, and 348-360.

it Mind? The imagined great value of Mind as the agent or agency of consciousness resided in its supposed power of working by Final Causation, and so securing (what was alone truly valuable) the reality of the facts of Teleology. Whereas we can now see, as a result of our analysis, that these facts are secure of themselves, independently of any hypothesis we may frame as to their genesis or real conditioning. Mind, supposing it to be a reality, can do no more than Matter in this respect, when both mind and matter are reduced to the rank of real conditions from that of causes. Psychology, indeed, has to face the question of the reality of Mind, in order to its constitution as a positive science; and this for Psychology is the first and fundamental question. On this question I may, perhaps, be allowed to say that I continue to hold with the physiologists, though it is not a question which can be discussed here.

Moreover, by the subjective analysis of consciousness into its distinguishable though inseparable elements, formal and material, the directions are suggested to us, in which we may conceive that the unknown parts of the existent Universe transcend our human powers of perception and knowledge. First, as to the formal element. Time and Space, it is true, are forms essential to human consciousness; but it does not follow that they are the only forms in the Universe of Things, or the only formal elements in the infinite or Universal Consciousness or Subjective Panorama (I do not mean a Mind or Conscious Being) of which that Universe is the objective aspect. They, it is true, must be elements in it, but there may be others beside them, with which they are intimately connected, but of which we can form no positive idea. So also with the material element, the element of specific feeling. As specific qualities of feeling we have seen that these are ultimate data in our own consciousness, not admitting of a causal explanation, but dependent for their genesis, or arising in our consciousness, upon our own endowment as living and sentient beings. There is nothing to restrict their number and variety,

when considered as the content of an infinite or Universal Consciousness.

Nor can we conceive them, when so considered, as limited or restricted in any way. Their indefinitely great variety, both in point of kind and in degree of intensity, is shared alike by modes of pain, suffering, and evil, whether sensuous, intellectual, or moral, and by opposite modes of pleasure, satisfaction, and good, though all alike are unimaginable by us in their specific qualities and degrees of intensity. The difference between good and evil, truth and error, moral right and wrong, is not thereby obliterated, but rather enforced and intensified, by the endless vista of opposite possibilities which this mode of analysing lays open to our thought. For these unseen, unfelt, unknown modes of consciousness, though merely possibilities to us, are realities in the Universal Consciousness, or Subjective Panorama, and from this thought of their reality they derive a value as the Religious Sanction of right conduct. I do not mean a Sanction in the juristic sense of rewards or punishments to be experienced by conscious beings, in a future life, in consequence of their doings in the present life. The question of a future life itself, a positive answer to which, yes or no, can only be expected from a knowledge of the real conditioning of consciousness in conscious beings, lies wholly beyond the scope of the present paper. I mean what may strictly be called a religious sanction,—a sense of unassailable rest and satisfaction derivable from the thought, that the content of our own subjective panorama, including, of course, that of our desires, purposes, and volitions, has been brought into harmony with the content of an Universal Consciousness, whatever it may be, and whether the prolongation of our own life as conscious beings, beyond the grave, is or is not included therein.

Compared with such an universal content, our own specific feelings, though a necessary part of it, are but a minute group. And this view would hold good without supposing any addition

made to the formal elements, time and space, which are essential to our own consciousness, since these elements are limitless and inexhaustible. Much more, then, is it enforced by the consideration that additional formal elements, as well as additional varieties of specific feelings, may be included in the nature of an Universal Consciousness. We are thus led to conceive human consciousness, and the positively known or knowable world which it reveals to us, as an island emerging from a boundless ocean of modes of consciousness and existence, which are real in the same sense of the term as our own world and our own consciousness, but which we, as finite beings, have no means of positively knowing, or even positively imagining. It is everywhere about us, and with it we are indissolubly connected; the content of our consciousness being connected with that of the Universal Consciousness as a part is connected with the whole of which it is a part, and the existence of our consciousness being dependent on its existence, and on the laws which govern the real conditioning of all its parts.

For however otherwise we may think of the unknowable parts of the Universe, we can never think of them as wholly severed from the knowable. They must be thought of both as preceding, accompanying, and following the knowable parts, and also as subject, equally with them, to uniformities of law, which it is their nature, in existing, to effectuate and exemplify. Their future is therefore implied in their past and present, just as in the case of the knowable parts. With them they make a limitless whole, which is both rational and teleologic, the knowable parts of which can never be conceived except as having consequences, correspondences, Ends, *τέλη*, some of which can be realised only in the parts which are to us unknowable. Besides the Ends which we may conceive as realisable in the knowable parts of the Universe, there are others which we must conceive as realisable only in the unknowable; the knowable parts themselves, as a whole, have, in fact, a function to perform, a character to sustain, as together

constituting a member of the whole undivided and boundless Universe, its knowable and its unknowable parts being taken together. But of what the Ends are which are to be realised by this function or this character we can form no speculative conception, for to do so would involve treating them, though admitted to be unknowable, as if they belonged to the knowable parts of the Universe.

Two things I think I have shown in the foregoing analysis—first, that no ultimate speculative answer to the question Why? or What for? is conceivable, save one which is drawn from the nature or content of consciousness, as distinguished from its genesis or real conditioning; and second, that such a conceivable speculative answer is as far beyond the reach of our human speculative powers, as the conception either of a first beginning or of a last end of time-duration. All, therefore, that we can do here is to consider what Existents, in our positively known world, are capable of forming the idea of there being such Ends to be realised in the unknowable parts of the Universe, as with those Existents we shall be in natural sympathy; and what feelings and ideas in their consciousness demand realisation in greater perfection and intensity than is possible under the positively known conditions of the present world. The teleologic feelings and ideas of Persons thus form our practical *agens* with those parts of the Universe which, speculatively and positively, are unknowable. In trusting to them, and guiding our conduct in accordance with them, we trust to our own nature as sentient and rational beings, all reasoning being teleologic, that is, the aiming at something better being essential to its exercise, however indistinctly that better may be conceived, and the whole positively known world, of which as Persons we are parts, being a dependent portion of the Universe. than which we can conceive no higher idea, the possibility of no ampler existence.

The teleological connection which I have thus tried to make evident between the knowable and the unknowable

parts of the Universe is the speculative foundation of Religion, the philosophical justification of religious Faith as a rational attitude of mind, a faith in the goodness and beneficence, as well as the rationality, of the Divine Power (meaning thereby the fact and the law of the Existent Universe), which goes beyond any positive knowledge which human beings can possibly attain. The philosophical position from which I speak must here be borne in mind. It is that of analysing human consciousness as consciousness simply, in preference to arguing from principles, ideas, or distinctions, assumed whether knowingly or unknowingly as self-evident, and used as pre-suppositions of our reasoning. The result, nevertheless, is not out of harmony with results which may conceivably be reached (by added hypotheses) on the basis of a psychological, or what may be called a faculty-philosophy, such as Kant's, since we may on such a basis regard all positive knowledge as the work of an assumed faculty of Understanding, all religious faith as that of an assumed faculty of Practical Reason. Yet for myself I cannot but think, that a philosophy built on analysis of experience simply is incomparably the more secure. A philosophy founded on analysis of experience without assumptions makes evident the lines on which speculative reasoning *must* move, whatever its results may be: a philosophy founded on assumptions shows what results you *may* attain if you like, so long as your assumptions are accepted as true.

The essential feature in all reasoning, whereby it becomes the philosophical basis and justification of religious Faith in Realities which transcend all positive knowledge, is this: that it compels us to conceive those realities as indefinitely better and higher in all respects than any realities which we can definitely and positively conceive, while, at the same time, it enforces the reality of the connection between those realities and ourselves as finite conscious beings dependent upon them. We endeavour, in fact, to conceive their nature by what we know and feel to be best and highest in our known world, a

best and highest which is not obliterated but included, not lost but carried to completer development, in the limitless Whole, of which our known world is a part. We conceive, or rather endeavour to conceive, what for this purpose we call the Divine Power, as a Power exercised by a Person,—Persons being the highest real Existents positively known to us,—and guided by the highest known motive, the sentiment of Love, which is teleologic in character, craving for love in return. We are thus giving definiteness to our thoughts of GOD, the great Object of our religious faith, and in so doing we are justified by reason, so long as we do not mistake the definiteness so obtained for a speculative conception of the Divine Nature, which is intellectually adequate to represent the Transcendent Reality. To make this mistake would be to imagine the reality narrowed to anthropomorphic dimensions.

III.—THE NATURE AND REALITY OF OBJECTS OF PERCEPTION.

By G. E. MOORE.

THERE are two beliefs in which almost all philosophers, and almost all ordinary people are agreed. Almost everyone believes that he himself and what he directly perceives do not constitute the whole of reality: he believes that *something* other than himself and what he directly perceives *exists* or is *real*. I do not mean to say that almost everyone believes that what he directly perceives is real: I only mean that he does believe that, whether what he directly perceives is real or not, something other than it and other than himself certainly is so. And not only does each of us thus agree in believing that *something* other than himself and what he directly perceives is real: almost everyone also believes that *among* the real things, other than himself and what he directly perceives, are other persons who have thoughts and perceptions in some respects similar to his own. That most people believe this I think I need scarcely try to show. But since a good many philosophers may appear to have held views contradictory of this one, I will briefly point out my reason for asserting that most philosophers, even among those (if any) who have believed the contradictory of this, have yet held this as well. Almost all philosophers tell us something about the nature of *human* knowledge and *human* perception. They tell us that *we* perceive so and so; that the nature or origin of *our* perceptions is such and such; or (as I have just been telling you) that men in general have such and such beliefs. It might, indeed, be said that we are not to interpret such language too strictly: that, though a philosopher talks about *human* knowledge and *our* perceptions, he only means to talk

about his own. But in many cases a philosopher will leave no doubt upon this point, by expressly assuming that there are other perceptions, which differ in some respects from his own: such, for instance, is the case when (as is so common nowadays) a philosopher introduces psycho-genetic considerations into his arguments—considerations concerning the nature of the perceptions of men who existed before and at a much lower stage of culture than himself. Any philosopher, who uses such arguments, obviously assumes that perceptions other than his own have existed or been real. And even those philosophers who think themselves justified in the conclusion that neither their own perceptions nor any perceptions like theirs are *ultimately* real, would, I think admit, that *phenomenally*, at least, they *are* real, and are certainly *more* real than some other things.

Almost everyone, then, does believe that some perceptions other than his own, and which he himself does not directly perceive, are real; and believing this, he believes that something other than himself and what he directly perceives is real. But how do we know that anything exists except our own perceptions, and what we directly perceive? How do we know that there are any other people, who have perceptions in some respects similar to our own?

I believe that these two questions express very exactly the nature of the problem which it is my chief object, in this paper, to discuss. When I say these words to you, they will at once suggest to your minds the very question, to which I desire to find an answer; they will convey to you the very same meaning which I have before my mind, when I use the words. You will understand at once what question it is that I mean to ask. But, for all that, the words which I have used are highly ambiguous. If you begin to ask yourselves what I do mean by them, you will find that there are several quite different things which I might mean. And there is, I think, great danger of confusing these different meanings with one

another. I think that philosophers, when they have asked this question in one sense, have often answered it in quite a different sense; and yet have supposed that the answer which they have given is an answer to the very same question which they originally asked. It is precisely because there is this ambiguity—this danger of confusion, in the words which I have used, that I have chosen to use them. I wish to point out as clearly as I can, not only what I do mean by them, but also some things which I do *not* mean; and I wish to make it clear that the questions which I do *not* mean to ask, are different questions from that which I do mean to ask.

I will take the second of my two questions, since there is in the other an additional ambiguity to which I do not now wish to call attention. My second question was: How do we know that there exist any other people who have perceptions in some respects similar to our own? What does this question mean?

Now I think you may have noticed that when you make a statement to another person, and he answers "How do you know that that is so?" he very often means to suggest that you do *not* know it. And yet, though he means to suggest that you do not *know* it, he may not for a moment wish to suggest that you do not *believe* it, nor even that you have not that degree or kind of conviction, which goes beyond mere belief, and which may be taken to be essential to anything which can properly be called knowledge. He does not mean to suggest for a moment that you are saying something which you do not believe to be true, or even that you are not thoroughly convinced of its truth. What he does mean, to suggest is that what you asserted was not *true*, even though you may not only have believed it but felt sure that it was true. He suggests that you don't *know* it, in the sense that what you believe or feel sure of is not true.

Now I point this out, not because I myself mean to suggest that we don't know the existence of other persons, but merely

in order to show that the word "know" is sometimes used in a sense in which it is not merely equivalent to "believe" or "feel sure of." When the question "How do you *know* that?" is asked, the questioner does not merely mean to ask "How do you come to believe that, or to be convinced of it?" He sometimes, and I think generally, means to ask a question with regard to the *truth*, and not with regard to the *existence* of your belief. And similarly when I ask the question "How do we know that other people exist?" I do *not* mean to ask "How do we come to believe in or be convinced of their existence?" I do not intend to discuss this question *at all*. I shall not ask what *suggests* to us our belief in the existence of other persons or of an external world; I shall not ask whether we arrive at it by inference or by "instinct" or in any other manner, which ever has been or may be suggested: I shall discuss no question of any kind whatever with regard to its origin, or cause, or the way in which it arises. These psychological questions are *not* what I propose to discuss. When I ask the question "How do we know that other people exist?" I do *not* mean: "How does our belief in their existence arise?"

• But if I do not mean this, what do I mean? I have said that I mean to ask a question with regard to the *truth* of that belief; and the particular question which I mean to ask might be expressed in the words: *What reason have we for our* belief in the existence of other persons? But these are words which themselves need some explanation, and I will try to give it.

• In the first place, then, when I talk of "a reason," I mean *only* a good reason and *not* a bad one. A bad reason is, no doubt, a reason, in one sense of the word; but I mean to use the word "reason" exclusively in the sense in which it is equivalent to "good reason." But what, then, is meant by a good reason for a belief? I think I can express sufficiently accurately what I mean by it in this connection, as follows:—A

good reason for a belief is a proposition which is true, and which would not be true unless the belief were also true. We should, I think, commonly say that when a man knows such a proposition he has a good reason for his belief; and, when he knows no such proposition, we should say that he has no reason for it. When he knows such a proposition, we should say he knows something which is a reason for thinking his belief to be true—something from which it *could* be validly inferred. And if, in answer to the question "How do you know so and so?" he were to state such a proposition, we should, I think, feel that he had answered the question which we meant to ask. Suppose, for instance, in answer to the question "How do you know that?" he were to say "I saw it in the *Times*." Then, if we believed that he had seen it in the *Times*, and also believed that it would not have been in the *Times*, unless it had been true, we should admit that he had answered our question. We should no longer doubt that he did *know* what he asserted, we should no longer doubt that his belief was true. But if, on the other hand, we believed that he had not seen it in the *Times*—if, for instance, we had reason to believe that what he saw was not the statement which he made, but some other statement which he mistook for it; or if we believed that the kind of statement in question was one with regard to which there was no presumption that, being in the *Times*, it would be true: in *either* of these cases we should, I think, feel that he had *not* answered our question. We should still doubt whether what he had said was true. We should still doubt whether he *knew* what he asserted; and since a man cannot tell you how he *knows* a thing, unless he does know that thing, we should think that, though he might have told us truly how he *came to believe it*, he had certainly not told us how he *knew* it. But though we should thus hold that he had *not* told us *how he knew* what he had asserted, and that he had given us no reason for believing it to be true; we must yet admit that he had given us a reason, in a sense—

a *bad* reason, a reason which was no reason because it had no tendency to show that what he believed was true; and we might also be perfectly convinced that he had given us *the reason* why he believed it—the proposition by believing which he was induced also to believe his original assertion.

I mean, then, by my question, "How do we know that other people exist?" what, I believe, is ordinarily meant, namely, "What reason have we for believing that they exist?" and by this again I mean, what I also believe is ordinarily meant, namely, "What proposition do we believe, which is both true itself and is also such that it would not be true, unless other people existed?" And I hope it is plain that this question, thus explained, is quite a different question from the psychological question, which I said I did *not* mean to ask—from the question, "How does our belief in the existence of other people arise?" My illustration, I hope, has made this plain. For I have pointed out that we may quite well hold that a man has told us how a belief of his arises, and even what was the reason which made him adopt that belief, and yet may have failed to give us any *good reason* for his belief—any proposition which is both true itself, and also such that the truth of his belief follows from it. And, indeed, it is plain that if any one ever believes what is false, he is believing something for which there *is* no good reason, in the sense which I have explained, and for which, therefore, he cannot possibly have a good reason: and yet it plainly does not follow that his belief did not arise in any way whatever, nor even that he had no reason for it—no *bad* reason. It is plain that false beliefs do arise in some way or other—they have origins and causes: and many people who hold them *have* bad reasons for holding them—their belief does arise (by inference or otherwise) from their belief in some other proposition, which is not itself true, or else is not a *good* reason for holding that, which they infer from it, or which, in some other way, it induces them to believe. I submit, therefore, that the question, "What

good reason have we for believing in the existence of other people?" is different from the question, "How does that belief arise?" But when I say this, I must not be misunderstood; I must not be understood to affirm that the answer to both questions *may* not, in a sense, be the same. I fully admit that the very same fact, which suggests to us the belief in the existence of other people, *may* also be a good reason for believing that they do exist. All that I maintain is that the question whether it is a good reason for that belief is a different question from the question whether it suggests that belief: if we assert that a certain fact *both* suggests our belief in the existence of other persons and is *also* a good reason for holding that belief, we are asserting two different things and not one only. And hence, when I assert, as I shall assert, that we *have* a good reason for our belief in the existence of other persons, I must not be understood also to assert either that we infer the existence of other persons from this good reason, or that our belief in that good reason suggests our belief in the existence of other persons in any other way. It is plain, I think, that a man may believe two true propositions, of which the one would not be true, unless the other were true too, without, in any sense whatever, having arrived at his belief in the one *from* his belief in the other; and it is plain, at all events, that the question whether his belief in the one *did* arise from his belief in the other, is a different question from the question whether the truth of the one belief follows from the truth of the other.

I hope, then, that I have made it a little clearer what I mean by the question: "What reason have we for believing in the existence of other people?" and that what I mean by it is at all events different from what is meant by the question: "How does our belief in the existence of other people arise?" But I am sorry to say that I have not yet reached the end of my explanations as to what my meaning is. I am afraid that the subject may seem very tedious. I can assure you that

I have found it excessively tedious to try to make my meaning clear to myself. I have constantly found that I was confusing one question with another, and that, where I had thought I had a good reason for some assertion, I had in reality no good reason. But I may perhaps remind you that this question, "How do we know so and so?" "What reason have we for believing it?" is one of which philosophy is full; and one to which the most various answers have been given. Philosophy largely consists in giving reasons; and the question what are good reasons for a particular conclusion and what are bad, is one upon which philosophers have disagreed as much as on any other question. For one and the same conclusion different philosophers have given not only different, but incompatible, reasons; and conversely different philosophers have maintained that one and the same fact is a reason for incompatible conclusions. We are apt, I think, sometimes to pay too little attention to this fact. When we have taken, perhaps, no little pains to assure ourselves that our own reasoning is correct, and especially when we know that a great many other philosophers agree with us, we are apt to assume that the arguments of those philosophers, who have come to a contradictory conclusion, are scarcely worthy of serious consideration. And yet, I think, there is scarcely a single reasoned conclusion in philosophy, as to which we shall not find that some other philosopher, who has, so far as we know, bestowed equal pains on his reasoning, and with equal ability, has reached a conclusion incompatible with ours. We may be satisfied that we are right, and we may, in fact, be so; but it is certain that *both* cannot be right: either our opponent or we must have mistaken bad reasons for good. And this being so, however satisfied we may be that it is not we who have done so, I think we should at least draw the conclusion that it is by no means easy to avoid mistaking bad reasons for good; and that no process, however laborious, which is in the least likely to help us in avoiding this should be evaded. But it is at least possible that one source of error

lies in mistaking one kind of reason for another—in supposing that, because there is, in one sense, a reason for a given conclusion, there is also a reason in another, or that because there is, in one sense, no reason for a given conclusion, there is, therefore, no reason at all. I believe myself that this is a very frequent source of error: but it is at least a possible one. And where, as disagreements show, there certainly is error on one side or the other, and reason, too, to suppose that the error is not easy to detect, I think we should spare no pains in investigating any source, from which it is even possible that the error may arise. For these reasons I think I am perhaps doing right in trying to explain as clearly as possible not only what reasons we have for believing in an external world, but also in what sense I take them to be reasons.

I proceed, then, with my explanation. And there is one thing, which, I think my illustration has shown that I do *not* mean. I have defined a reason for a belief as a true proposition, which would not be true unless the belief itself—what is believed—were also true; and I have used, as synonymous with this form of words, the expressions: A reason for a belief is a true proposition from which the truth of the belief *follows* from which it *could be validly inferred*. Now these expressions might suggest the idea that I mean to restrict the word “reason,” to what, in the strictest sense, might be called a *logical* reason—to propositions from which the belief in question *follows*, according to the rules of inference accepted by Formal Logic. But I am *not* using the words “follow,” “validly inferred,” in this narrow sense; I do *not* mean to restrict the words “reason for a belief” to propositions from which the laws of Formal Logic state that the belief could be deduced. The illustration which I gave is inconsistent with this restricted meaning. I said that the fact that a statement appeared in the *Times* might be a good reason for believing that that statement was true. And I am using the word “reason” in the wide and popular sense, in which it really

might be. If, for instance, the *Times* stated that the King was dead, we should think that was a good reason for believing that the King was dead; we should think that the *Times* would not have made such a statement as that unless the King really were dead. We should, indeed, not think that the statement in the *Times* rendered it absolutely *certain* that the King was dead. But it is extremely unlikely that the *Times* would make a statement of this kind unless it were true; and, in that sense, the fact of the statement appearing in the *Times* would render it *highly probable*—much more likely than not—that the King was dead. And I wish it to be understood that I am using the words “reason for a belief” in this extremely wide sense. When I look for a good reason for our belief in the existence of other people, I shall not reject any proposition merely on the ground that it only renders their existence probable—only shows it to be more likely than not that they exist. Provided that the proposition in question does render it *positively probable* that they exist, then, if it also conforms to the conditions which I am about to mention, I shall call it a “good reason.”

But it is not every proposition which renders it probable that other people exist, which I shall consider to be a good answer to my question. I have just explained that my meaning is wide in one direction—in admitting *some* propositions which render a belief merely probable; but I have now to explain that it is restricted in two other directions: I do mean to exclude certain propositions which do render that belief probable. When I ask: What reason have *we* for believing in the existence of other people? a certain ambiguity is introduced by the use of the plural “we.” If each of several different persons has a reason for believing that he himself exists, then it is not merely probable, but certain, according to the rules of Formal Logic, that, in a sense, *they* “have a reason for believing” that several people exist; each has a reason for believing that he himself exists; and, therefore, all of them,

taken together, have reasons for supposing that several persons exist. If, therefore, I were asking the question: What reason have *we* for believing in the existence of other persons? in this sense, it would follow that if each of us has a reason for believing in his own existence, these reasons, taken together, would be a reason for believing in the existence of all of us. But I am not asking the question in this sense: it is plain that this is not its natural sense. What I do mean to ask is: Does *each single one* of us know any proposition, which is a reason for believing that *others* exist? I am using "we," that is to say, in the sense of "each of us." But again I do mean *each* of us: I am not merely asking whether some *one* man knows a proposition which is a reason for believing that other men exist. It would be possible that some one man, or some few men, should know such a proposition, and yet the rest know no such proposition. But I am not asking whether this is the case. I am asking whether among propositions of the kind which (as we commonly suppose) all or almost all men know, there is any which is a reason for supposing that other men exist. And in asking this question I am not begging the question by supposing that all men do exist. My question might, I think, be put quite accurately as follows. There are certain kinds of belief which, as we commonly suppose, all or almost all men share. I describe this kind of belief as "our" beliefs, simply as an easy way of pointing out which kind of belief I mean, but without assuming that all men do share them. And I then ask: Supposing a single man to have beliefs of this kind, which among them would be a good reason for supposing that other men existed having like beliefs?

This, then, is the first restriction which I put upon the meaning of my question. And it is, I think, a restriction which, in their natural meaning, the words suggest. When we ask: What reason have we for believing that other people exist? we naturally understand that question to be equivalent

to: What reason has *each* of us for that belief? And this question again is naturally equivalent to the question: Which among the propositions that a single man believes, but which are of the kind which (rightly or wrongly) we assume all men to believe, are such that they would not be true unless some other person than that man existed? But there is another restriction which, I think, the words of my question also naturally suggest. If we were to ask anyone the question: How do you know that you did see that statement in the *Times*? and he were to answer "Because I did see it in the *Times* and in the *Standard* too," we should not think that he had given us a *reason* for the belief that he saw it in the *Times*. We should not think his answer a *reason*, because it asserts the very thing for which we require a reason. And similarly when I ask: How do we know that any thing or person exists, other than ourselves and what we directly perceive? What reason have we for believing this? I must naturally be understood to mean: What proposition, *other* than one which itself asserts or presupposes the existence of something beyond ourselves and our own perceptions, is a reason for supposing that such a thing exists? And this restriction obviously excludes an immense number of propositions of a kind which all of us do believe. We all of us believe an immense number of different propositions about the existence of things which we do not directly perceive, and many of these propositions are, in my sense, good reasons for believing in the existence of still other things. The belief in the existence of a statement in the *Times*, when we have not seen that statement, may, as I implied, be a good reason for believing that someone is dead. But no such proposition can be a good answer to my question, because it asserts the very kind of thing for which I require a reason: it asserts the existence of something other than myself and what I directly perceive. When I am asking: What reason have I for believing in the existence of anything but myself, my own perceptions, and what I do directly perceive? you would

naturally understand me to mean: What reason, *other than* the existence of such a thing, have I for this belief?

Each of us, then, we commonly assume, believes some true propositions, which do not themselves assert the existence of anything other than himself, his own perceptions, or what he directly perceives. Each of us, for instance, believes that he himself has and has had certain particular perceptions: and these propositions are propositions of the kind I mean—propositions which do not themselves assert the existence of anything *other than* himself, his own perceptions, and what he directly believes: they are, I think, by no means the only propositions of this kind, which most of us believe: but they *are* propositions of this kind. But, as I say, I am not assuming that each of us—each of several different people—does believe propositions of this kind. All that I assume is that at least one man does believe some such propositions. And then I ask: Which among those true propositions, which one man believes, are such that they would probably not be true, unless some other man existed and had certain particular perceptions? Which among them are such that it *follows* (in the wide sense, which I have explained) from their truth, that it is more likely than not that some other man has perceptions? This is the meaning of my question, so far as I have hitherto explained it: and I hope this meaning is quite clear. It is in this sense that I am asking: What reason have we for believing that other people exist? How do we know that they exist? This, indeed, is not *all* that I mean by that question: there is, one other point—the most important one—which remains to be explained. But this is *part* of what I mean to ask; and before I go on to explain what else I mean, I wish first to stop and enquire what is the answer to this part of my question. What is the answer to the question: Which among the true propositions, of a kind which (as we commonly assume) each of us believes, and which do not themselves assert the existence of anything other than that person himself, his own perceptions,

or what he directly perceives, are such that they would probably not be true unless some other person existed, who had perceptions in some respects similar to his own?

Now to this question the answer is very obvious. It is very obvious that in this sense we have reasons for believing in the existence of other persons, and also what some of those reasons are. But I wish to make it quite plain that this is so: that in this sense one man *has* a reason for believing that another has certain perceptions. All that I am asking you to grant, is, you see, that some of you would not be having just those perceptions which you now have, unless I, as I read this paper, were perceiving more or less black marks on a more or less white ground: or that I on the other hand, should not be having just those perceptions which I now have, unless some other persons than myself were hearing the sounds of my voice. And I am not asking you even to grant that this is certain—only that it is positively probable—more likely than not. Surely it is very obvious that this proposition is true. But I wish to make it quite clear what would be the consequences of denying that any such propositions are true—propositions which assert that the existence of certain perceptions in one man are a reason for believing the existence of certain perceptions in another man—which assert that one man would probably not have had just those perceptions which he did have, unless some other man had had certain particular perceptions. It is plain, I think, that, unless some such propositions are true, we have no more reason for supposing that Alexander the Great ever saw an elephant, than for supposing that Sindbad the Sailor saw a Roc; we have no more reason for supposing that anybody saw Julius Caesar murdered in the Senate House at Rome, than for supposing that somebody saw him carried up to Heaven in a fiery chariot. It is plain, I think, that if we have any reason at all for supposing that in all probability Alexander the Great did see an elephant, and that in all probability no such person as Sindbad the Sailor ever saw a Roc, part of that reason con-

sists in the assumption that some other person would probably not have had just those perceptions which he did have, unless Alexander the Great had seen an elephant, and unless Sindbad the Sailor had not seen a Roc. And most philosophers, I think, are willing to admit that we have some reason, in some sense or other, for such propositions as these. They are willing to admit not only that some persons probably did see Julius Caesar murdered in the Senate House; but also that some persons, other than those who saw it, had and have *some reason* for supposing that some one else probably saw it. Some sceptical philosophers might, indeed, deny both propositions; and to refute their views, I admit, other arguments are needed than any which I shall bring forward in this paper. But most philosophers will, I think, admit not only that facts, for which there is, as we say, good historical evidence, are probably true; but also that what we call good historical evidence really is in some sense a good reason for thinking them true. Accordingly I am going to assume that many propositions of the following kind are true. Propositions, namely, which assert that one man would probably not have certain perceptions which he does have, unless some other man had certain particular perceptions. That some of you, for instance, would probably not be having precisely the perceptions which you are having, unless I were having the perception of more or less black marks on a more or less white ground. And, in this sense, I say, we certainly have reasons for supposing that other people have perceptions similar, in some respects, to those which we sometimes have.

But when I said I was going to ask the question: What reason have we for supposing that other people exist? you will certainly not have thought that I merely meant to ask the question which I have just answered. My words will have suggested to you something much more important than merely this. When, for instance, I said that to the question "How do you know that?" the answer "I saw it in the *Times*" would be a satisfactory answer, you may have felt, as I felt, that it

would not in all circumstances be regarded as such. The person who asked the question might, in some cases, fairly reply: "That is no answer: how do you know that, because you saw a thing in the *Times*, it is therefore true?" In other words he might ask for a *reason* for supposing that the occurrence of a particular statement in the *Times* was a reason for supposing that statement true. And this is a question to which we all believe that there may be an answer. We believe that, with regard to some kinds of statements which the *Times* makes—some kinds of statements with regard to Fiscal Policy for example—the fact that the *Times* makes them is no reason for supposing them to be true: whereas with regard to other kinds of statement, which it makes, such a statement, for instance, as that the King was dead, the fact that it makes them *is* a reason for supposing them true. We believe that there are some kinds of statement, which it is very unlikely the *Times* would make, unless they were true: and others which it is not at all unlikely that the *Times* might make, although they were not true. And we believe that a reason might be given for distinguishing, in this way, between the two different kinds of statement: for thinking that, in some cases (on points, for instance, which, as we should say, are not simple questions of fact) the *Times* is fallible, whereas in other cases, it is, though not absolutely infallible, very unlikely to state what is not true.

Now it is precisely in this further sense that I wish to consider: what reason have we for believing that certain particular things, other than ourselves, our own perceptions, and what we directly perceive, are real? I have asserted that I do have certain perceptions, which it is very unlikely I should have, unless some other person had certain particular perceptions: that, for instance, it is very unlikely that I should be having precisely those perceptions which I am now having, unless someone else were hearing the sound of my voice. And I now wish to ask: What reason have I for supposing that this is unlikely? What reason has any of us for supposing that

any such proposition is true? And I mean by "having a reason" precisely what I formerly meant. I mean: What other proposition do I know, which would not be true, unless my perception were connected with someone else's perception, in the manner in which I asserted them to be connected? Here again I am asking for a *good reason*; and am not asking a psychological question with regard to origin. Here again I am not asking for a reason, in the strict sense of Formal Logic; I am merely asking for a proposition, which would probably not be true, unless what I asserted were true. Here again I am asking for some proposition of a kind which *each* of us believes; I am asking: What reason has *each* of us for believing that some of his perceptions are connected with particular perceptions of other people in the manner I asserted?—for believing that he would not have certain perceptions that he does have, unless some other person had certain particular perceptions? And here again I am asking for a *reason*—I am asking for some proposition *other* than one which itself asserts: When one man has a perception of such and such a particular kind, it is probable that another man has a perception or thought of this or that other kind.

But what kind of reason can be given for believing a proposition of this sort? For believing a proposition which asserts that, since one particular thing exists, it is probable that another particular thing also exists? One thing I think is plain, namely that we can have no good reason for believing such a proposition, unless we have good reason for believing some *generalisation*. It is commonly believed, for instance, that certain so-called flint arrow-heads, which have been discovered, were probably made by prehistoric men; and I think it is plain that we have no reason for believing this unless we have reason to suppose that objects which resemble these in certain particular respects are *generally* made by men—are *more often* made by men than by any other agency. Unless certain particular characteristics which those arrow-heads have were character-

istics which belonged at least more frequently to articles of human manufacture than to any articles not made by men, it would surely be just as likely as not that these arrow-heads were *not* made by men—that they were, in fact, not arrow-heads. That is to say, unless we have reason to assert a *generalisation*—the generalisation that objects of a certain kind are *generally* made by men, we have no reason to suppose that these particular objects, which are of the kind in question, *were* made by men. And the same, so far as I can see, is true universally. If we ever have any reason for asserting that, since one particular thing exists, another probably exists or existed or will exist also, part of our reason, at least, must consist in reasons for asserting some generalisation—for asserting that the existence of things of a particular kind is, more often than not, accompanied or preceded or followed by the existence of things of another particular kind. It is, I think, sometimes assumed that an alternative to this theory may be found in the theory that the existence of one kind of thing “intrinsically points to,” or is “intrinsically a sign or symbol of” the existence of another thing. It is suggested that when a thing which thus “points to” the existence of another thing exists, then it is at least probable that the thing “pointed to” exists also. But this theory, I think, offers no real alternative. For, in the first place, when we say that the existence of one thing A is a “sign” of or “points to” the existence of another thing B, we very commonly actually mean to say that when a thing like A exists, a thing like B *generally* exists too. We may, no doubt, mean something else too; but this we do mean. We say, for instance, that certain particular words, which we hear or read, are a “sign” that somebody has thought of the particular things which we call the meaning of those words. But we should certainly hesitate to admit that the hearing or reading of certain words could be called a “sign” of the existence of certain thoughts, unless it were true that when those words are heard or read, the thoughts in question *generally* have

existed. If when those words were heard or read, the thoughts had generally *not* existed, we should say that, in one sense of the word at all events, the hearing of the words was *not* a sign of the existence of the thoughts. In this sense, therefore, to say that the existence of A "points to" or "is a sign of" the existence of B, is actually to say that when A exists, B *generally* exists also. But, no doubt, the words "points to," "is a sign of" may be used in some other sense: they may, for instance, mean only that the existence of A *suggests* in some way the belief that B exists. And in such a case we might certainly know that the existence of A pointed to the existence of B, without knowing that when A existed B generally existed also. Let us suppose, then, that in some such sense A does "point to" the existence of B; can this fact give us a reason for supposing it even probable that B exists? Certainly it can, *provided* it is true that when A *does* point to the existence of B, B *generally* exists. But surely it can do so, only on this condition. If when A *points* to the existence of B, B, nevertheless, does *not* generally exist, then surely the fact that A points to the existence of B can constitute no probability that B does not exist: on the contrary it will then be probable that, even though A "points to" the existence of B, B does *not* exist. We have, in fact, only substituted the generalisation that A's *pointing to* B is generally accompanied by the existence of B, for the generalisation that A's *existence* is generally accompanied by the existence of B. If we are to have any reason for asserting that, when A *points to* or is a sign of the existence of B, B probably exists, we must still have a reason for some generalisation—for a generalisation which asserts that when one thing points to the existence of another, that other *generally* exists.

It is plain, then, I think, that if we are to find a reason for the assertion that some particular perception of mine would probably not exist, unless someone else were having or had had a perception of a kind which I can name, we must find a

reason for *some* generalisation. And it is also plain, I think, that in many cases of this kind the generalisation must consist in an assertion that when one man has a certain kind of perception, some other man generally has had some other perception or belief. We assume, for instance, that when we hear or read certain words, somebody besides ourselves has thought the thoughts, which constitute the meaning of those words; and it is plain, I think, that we have no reason for this assumption except one which is also a reason for the assumption that when certain words are heard or read, somebody generally has had certain thoughts. And my enquiry, therefore, at least includes the enquiry: What reason have we for such generalisations as these? for generalisations which assert a connection between the existence of a certain kind of perception in one man, and that of a certain kind of perception or belief in another man?

And to this question, I think, but one answer can be given. If we have any reason for such generalisations at all, some reason must be given, in one way or another, by observation—by observation, understood in the wide sense in which it includes “experiment.” No philosopher, I think, has ever failed to assume that observation does give a reason for *some* generalisations—for some propositions which assert that when one kind of thing exists, another generally exists or has existed in a certain relation to it. Even those who, like Hume, imply that observation cannot give a *reason* for anything, yet constantly appeal to observation in support of generalisations of their own. And even those who hold that observation can give no reason for any generalisation about the relation of one man’s perceptions to another’s, yet hold that it *can* give a reason for generalisations about the relation of some to others among a man’s own perceptions. It is, indeed, by no means agreed *how* observation can give a reason for any generalisation. Nobody knows what reason we have, if we have any, for supposing that it can. But *that* it can, everyone, I think, assumes. I think,

therefore, most philosophers will agree, that if we can find any reason at all for generalisations of the kind in which I am interested, a reason for *some* of them at all events must be found in observation. And what I propose to ask is: What reason can be found in observation for even a single proposition of the kind I have described? for a proposition which asserts that when one man has one kind of perception, another man generally has or has had another?

But, when it is said that observation gives us a reason for generalisations, two things may be meant, neither of which I mean. In the first place, we popularly use "observation" in a sense in which we can be said to *observe* the perceptions, feelings, and thoughts of other people: in which, therefore, we can be said to observe the very things with regard to which I am asking what reason we have for believing in their existence. But it is universally agreed that there is a sense in which no man can observe the perceptions, feelings or thoughts of any other man. And it is to this strict sense that I propose to confine the word. I shall use it in a sense, in which we can certainly be said to observe nothing, but ourselves, our own perceptions, thoughts and feelings, and what we directly perceive. And in the second place, it may be said that observations made by another person may give *me* a reason for believing some generalisation. And it is certainly the case that for many of the generalisations in which we all believe, if we have a reason in observation at all, it is not in *our own* observation that we have it: part of our reason, at all events, lies in things which *other* people have observed but which we ourselves have not observed. But in asking this particular question, I am not asking for reasons of this sort. The very question that I am asking is: What reason has any one of us for supposing that any other person whatever has ever made any observations? And just as, in the first meaning which I gave to this question, it meant: What thing, that any single man observes is such that it would probably not have existed, unless some other man had made a

particular observation? So now I am asking: Which among the things, which *one single man observes*, are such that they would probably not have existed, unless it were true that some of them generally stood in certain relations to observations of some other person? I am asking: Which among *my own* observations give me a reason for supposing that some of them are of a kind which are generally preceded or accompanied by observations of other people? Which, for instance, among my own observations give a good reason for the generalisation that when I hear certain words, somebody else has generally had certain particular thoughts, or that whenever anyone hears certain words, somebody else has generally had the thoughts which constitute what we call the meaning of those words? I am asking: Which among the vast series of observations, which any one individual makes during his lifetime, give a good reason for any generalisation *whatever* of this kind—a generalisation which asserts that some of them are generally preceded by certain thoughts, perceptions or feelings in other persons? I quite admit that there are some generalisations of this kind for which the observations of *some* particular men will *not* give a reason. All that I ask is: Is there even *one* generalisation of this kind, for which the kind of observations, which (as we commonly assume) each man, or nearly every man, does make, do give a reason? Among observations of the kind which (as we commonly assume) are common to you and to me, do yours, by themselves, give any reason for even *one* such generalisation? And do mine, by themselves, give any reason for even *one* such generalisation? And if they do, which, among these observations, is it which do so?

* My question is, then: What reason do my own observations give me, for supposing that any perception whatever, which I have, would probably not occur, unless some other person had a certain kind of perception? What reason do my own observations give me for supposing, for instance, that I should not be perceiving what I do now perceive, unless someone were

hearing the sound of my voice? What reason do your own observations give you for supposing that you would not be perceiving just what you are perceiving, unless I were perceiving more or less black marks on a more or less white ground? The question does, I think, appear to be a reasonable one; and most philosophers, I think, have assumed that there is an answer to it. Yet it may be said that there is no answer to it: that my own observations give me no reason whatever for any single proposition of this kind. There are certain philosophers (even apart from thorough sceptics, with whom, as I have said, I am not now arguing) who have denied that they do. There are certain philosophers who hold that nothing which any single one of us observes or can observe, gives the slightest reason for supposing that any of his own perceptions are generally connected with certain perceptions in other people. There are philosophers who hold that the only generalisations for which our own observations do give any warrant are generalisations concerning the manner in which our own perceptions, thoughts and feelings do and probably will succeed one another; and who conclude that, this being so, we have no reason whatever for believing in the existence of any other people. And these philosophers are, I think, right in drawing this conclusion from this premiss. It does not, indeed, follow from their premiss that we have not a reason in the sense which I first explained, and in which, I insisted, it must be admitted that we have a reason. It does not follow that some of our perceptions *are* not such as would probably not exist, unless some other person had certain perceptions. But, as I have urged, when we say that we have a reason for asserting the existence of something not perceived, we commonly mean something more than this. We mean not only that, since what we perceive does exist, the unperceived thing probably exists too; we mean also that we have some reason for asserting this connection between the perceived and the unperceived. And holding, as we do, that no reason can be given for asserting

such a connection, except observation, we should say that, if observation gives no reason for asserting it, we have *no* reason for asserting it; and having no reason for asserting this connection between the perceived and the unperceived,* we should say that we have none either for asserting the even probable existence of the unperceived. This, I think, is what we commonly mean by saying that we have no reason to believe in the existence of a particular thing which we do not perceive. And hence, I think, those philosophers who hold that our own observations give us no reason whatever for any generalisation whatever concerning the connection of any of them with those of other people, are quite right in concluding that we have no reason to assert that any other person ever did have any particular thought or perception whatever. I think that the words of this conclusion, understood in their natural meaning, express precisely what the premiss asserts. We need not, indeed, conclude, as many of these philosophers are inclined to do, that, because we have no reason for believing in the existence of other people, it is therefore highly doubtful whether they do exist. The philosophers who advocate this opinion commonly refute themselves by assigning the existence of other people as *part* of their reason for believing that it is very doubtful whether any other people exist. That for which we have no reason may, nevertheless, be certainly true. And, indeed, one of the philosophers who holds most clearly and expressly that *we* do know not only the existence of other people but also that of material objects, is also one of those who denies most emphatically that our own observations can give any reason for believing either in the one or in the other. I refer to Thomas Reid. Reid, indeed, allows himself to use not only the word "observe," but even the word "perceive," in that wide sense in which it might be said that we observe or perceive the thoughts and feelings of others: and I think that the fact that he uses the words in this sense, has misled him into thinking that his view is more plausible and more in accordance with Common

Sense than it really is: by using the words in this sense he is able to plead that "observation" really does give a reason for some of those generalisations, for which Common Sense holds that "observation" (in a narrower sense) does give a reason. But with regard to what we observe or perceive, in the strict sense to which I am confining those words, he asserts quite explicitly that it gives us no reason either for believing in the existence of material objects or for believing in the existence of other minds. Berkeley, he says, has proved incontrovertibly that it gives us no reason for the one, and Hume that it gives us no reason for the other.

Now these philosophers may be right in holding this. It may, perhaps, be true that, in this sense, my own observations give me no reason whatever for believing that any other person ever has or will perceive anything like or unlike what I perceive. But I think it is desirable we should realise, how paradoxical are the consequences which must be admitted, if this is true. It must then be admitted that the very large part of our knowledge, which we suppose to have some basis in experience, is by no means based upon experience, in the sense, and to the extent, which we suppose. We do for instance, commonly suppose that there is *some* basis in experience for the assertion that some people, whom we call Germans, use one set of words, to express much the same meaning, which we express by using a different set of words. But, if this view be correct, we must admit that no person's experience gives him any reason whatever for supposing that, when he hears certain words, anyone else has ever heard or thought of the same words, or meant anything by them. The view admits, indeed, that I do know that, when I hear certain words, somebody else has generally had thoughts more or less similar to those which I suppose him to have had: but it denies that my own observations could ever give me the least reason for supposing that this is so. It admits that my own observations may give me reason for

supposing that *if* anyone has ever had perceptions like mine in some respects, he will also have had other perceptions like others of mine: but it denies that they give me any reason for supposing that anyone else ever has had a perception like one of mine. It admits that my own observations may give me reason for supposing that certain perceptions and thoughts in *one* person (*if* they exist) will be followed or preceded by certain other perceptions and thoughts in that person: but it denies that they give me any reason whatever for *any* similar generalisation concerning the connection of a certain kind of perception in one person with a certain kind of perception in another. It admits that I should not have certain perceptions, which I do have, unless someone else had had certain other perceptions: but it denies that my own observations can give me any reason for saying so—for saying that I should not have had this perception, unless someone else had had that. No observations of mine, it holds, can ever render it probable that such a generalisation is true: no observation of mine can ever confirm or verify such a generalisation. If we are to say that any such generalisation whatever is based upon observation, we can only mean, what Reid means, that it is based on a series of assumptions. When I observe this particular thing, I assume that *that* particular thing, which I do not observe, exists; when I observe another particular thing, I again assume that a second particular thing, which I do not observe, exists; when I observe a third particular thing, I again assume that a third particular thing, which I do not observe, exists. These assumed facts---the assumed fact that one observation of mine is accompanied by the existence of one particular kind of thing, and that another observation of mine is accompanied by the existence of a different particular kind of thing, will then give me a reason for different generalisations concerning the connection of different perceptions of mine with different external objects---objects which I do not perceive. But (it is

maintained) nothing but a mass of such assumptions will give me a reason for any such generalisation.

Now I think it must be admitted that there is something paradoxical in such a view. I think it may be admitted that, in holding it, the philosopher of Common Sense departs from Common Sense at least as far in one direction as his opponents had done in another. But I think that there is some excuse for those who hold it: I think that, in one respect, they are more in the right than those who do not hold it—than those who hold that my own observations do give me a reason for believing in the existence of other people. For those who hold that my observations do give me a reason, have, I believe, universally supposed that the reason lies in a part of my observations, in which no such reason is to be found. This is why I have chosen to ask the question: *What* reason do my observations give me for believing that any other person has any particular perceptions or beliefs? I wish to consider *which* among the things which I observe will give such a reason. For this is a question to which no answer, that I have ever seen, appears to me to be correct. Those who have asked it have, so far as I know, answered it *either* by denying that my observations give me any reason *or* by pointing to a part of my observations, which, as it seems to me, really do give none. Those who deny are, it seems to me, right in holding that the reason given by those who affirm is *no* reason. And their correct opinion on this point will, I think, partly serve to explain their denial. They have supposed that if our observations give us any reason at all for asserting the existence of other people, that reason must lie where it has been supposed to lie by those who hold that they do give a reason. And then, finding that this assigned reason is no reason, they have assumed that there is no other.

I am proposing then to ask: Which among the observations, which I make, and which (as we commonly suppose) are similar in kind to those which all or almost all men make,

will give a reason for supposing that the existence of any of them is generally connected with the existence of certain kinds of perception or belief in other people? And in order to answer this question, it is obvious we must first consider two others. We must consider, in the first place: Of what nature must observations be, if they are to give a reason for any generalisation asserting that the existence of one kind of thing is generally connected with that of another? And we must consider in the second place: What kinds of things do we observe?

Now to the first of these questions I am not going to attempt to give a complete answer. The question concerning the rules of Inductive Logic, which is the question at issue, is an immensely difficult and intricate question. And I am not going to attempt to say, what kind of observations are *sufficient* to justify a generalisation. But it is comparatively easy to point out that a certain kind of observations are *necessary* to justify a generalisation; and this is all that I propose to do. I wish to point out certain conditions which observations must satisfy, if they are to justify a generalisation: without in any way implying that all observations which do satisfy these conditions, *will* justify a generalisation. The conditions, I shall mention, are ones which are certainly *not* sufficient to justify a generalisation; but they are, I think, conditions, without which no generalisation can be justified. If a particular kind of observations do *not* satisfy these conditions, we can say with certainty that those observations give us *no* reason for believing in the existence of other people; though, with regard to observations which *do* satisfy them, we shall only be able to say that they *may* give a reason.

What conditions, then, must observations satisfy, if they are to justify a generalisation? Let us suppose that the generalisation to be justified is one which asserts that the existence of a kind of object, which we will call A, is generally preceded,

accompanied, or followed by the existence of a kind of object, which we will call B. A, for instance, might be the hearing of a certain word by one person, and B the thought of that which we call the meaning of the word, in another person; and the generalisation to be justified might be that when one person hears a word, not spoken by himself, someone else has generally thought of the meaning of that word. What must I have observed, if the generalisation that the existence of A is generally preceded by the existence of B, is to be justified by my observations? One first point, I think, is plain. I must have observed both some object, which is in some respects like A, and which I will call α , and also some object in some respects like B, which I will call β : I must have observed both α and β , and also I must have observed β preceding α . This, at least, I must have observed. But I do not pretend to say *how* like α and β must be to A and B; nor do I pretend to say how often I must have observed β preceding α , although it is generally held that I must have observed this more than once. These are questions, which would have to be discussed, if we were trying to discover what observations were *sufficient* to justify the generalisation that the existence of A is generally preceded by that of B. But I am only trying to lay down the minimum, which is *necessary* to justify this generalisation; and therefore I am content to say that we must have observed something more or less like B preceding something more or less like A, at least once.

But there is yet another minimum condition. If my observation of β preceding α is to justify the generalisation that the *existence* of A is generally preceded by the *existence* of B, it is plain, I think, that both the β and the α , which I observed, must have *existed* or been *real*; and that also the existence of β must *really* have preceded that of α . It is plain that if, when I observed α and β , α existed but β did not, this observation could give me no reason to suppose that on another occasion when A existed, B *would* exist. Or again, if,

when I observed β preceding α , both β and α existed, but the existence of β did not *really* precede that of α , but, on the contrary, followed it, this observation could certainly give me no reason to suppose that, in general, the existence of A was *preceded* by the existence of B. Indeed this condition that what is observed must have been *real* might be said to be included in the very meaning of the word "observation." We should, in this connection, say that we had *not* observed β preceding α , unless β and α were both real, and β had really preceded α . If I say "I have *observed* that, on one occasion, my hearing of the word 'moon' was followed by my imagining a luminous silvery disc," I commonly mean to include in my statement the assertion that I did, on that occasion, really hear the word "moon," and really did have a visual image of a luminous disc, and that my perception was really followed by my imagination. If it were proved to me that this had not really happened, I should admit that I had not really observed it. But though this condition that, if observation is to give reason for a generalisation, what is observed must be real, may thus be said to be implied in the very word "observation," it was necessary for me to mention the condition explicitly. It was necessary, because, as I shall presently show, we do and must also use the word "observation" in a sense in which the assertion "I observe A" by no means includes the assertion "A exists"—in a sense in which it *may* be true that though I did observe A, yet A did *not* exist.

But there is also, I think, a third necessary condition, which is very apt to be overlooked. It may, perhaps, be allowed that observation gives some reason for the proposition that hens' eggs are generally laid by hens. I do not mean to say that any one man's observation can give a reason for this proposition: I do not assume either that it can or that it cannot. Nor do I mean to make any assumption as to what must be meant by the words "hens" and "eggs," if this proposition is to be true. I am quite willing to allow for the moment that, if it is

true at all, we must understand by "hens" and "eggs," objects very unlike that which we directly observe, when we see a hen in a yard, or an egg on the breakfast-table. I am willing to allow the possibility that, as some Idealists would say, the proposition "Hens lay eggs" is false, unless we mean by it: A certain kind of collection of spirits or monads sometimes has a certain intelligible relation to another kind of collection of spirits or monads. I am willing to allow the possibility that, as Reid and some scientists would say, the proposition "Hens lay eggs" is false, if we mean by it anything more than that: Certain configurations of invisible material particles sometimes have a certain spatio-temporal relation to another kind of configuration of invisible material particles. Or again I am willing to allow, with certain other philosophers, that we must, if it is to be true, interpret this proposition as meaning that certain kinds of sensations have to certain other kinds a relation which may be expressed by saying that the one kind of sensations "lay" the other kind. Or again, as other philosophers say, the proposition "Hens lay eggs" may possibly mean: Certain sensations of mine *would*, under certain conditions, have to certain other sensations of mine a relation which may be expressed by saying that the one set would "lay" the other set. But whatever the proposition "Hens' eggs are generally laid by hens" may *mean*, most philosophers would, I think, allow that, in some sense or other, this proposition was true. And they would also I think allow that we have *some* reason for it; and that *part* of this reason at all events lies in observation: they would allow that we should have no reason for it unless certain things had been observed, which have been observed. Few, I think, would say that the existence of an egg "intrinsically points" to that of a hen, in such a sense that, even if we had had no experience of any kind concerning the manner in which objects like eggs are connected with animals like hens, the mere inspection of an egg would justify the assertion: A hen has probably existed.

I assume, then, that objects having all the characteristics which hens' eggs have (whatever these may be) are generally laid by hens (whatever hens may be); and I assume that, if we have any reason for this generalisation at all, observation gives us some reason for it. But now, let us suppose that the only observations we had made were those which we should commonly describe by saying that we had seen a hen laying an egg. I do not say that any number of such observations, by themselves, would be *sufficient* to justify our generalisation: I think it is plain that they would not. But let us suppose, for the moment, that we had observed nothing else which bore upon the connection between hens and eggs; and that, if therefore our generalisation was justified by any observations at all, it was justified by these. We are supposing, then, that the observations which we describe as "seeing hens lay eggs" give some reason for the generalisation that eggs of that kind are generally laid by hens. And if these observations give reason for this, obviously *in a sense* they give reason for the generalisation that the existence of such an egg is generally preceded by that of a hen; and hence also, they give us reason to suppose that if such an egg exists, a hen has probably existed also—that unless a hen had existed, the egg would not have existed. But the point to which I wish to call attention is that it is *only* in a limited sense that they do give reason for this. They only give us reason to suppose that, for each egg, there has existed a hen, which was at some time *near* the place where the egg in question then was, and which existed at a time *near* to that at which the egg began to exist. The only kind of hens, whose existence they do give us reason to suppose, are hens, of which each was at some time in spatial and temporal proximity (or, if Idealists prefer, in the relations which are the "intelligible counterparts" of these) to an egg. They give us no information at all about the existence of hens (if there are any) which never came within a thousand miles of an egg, or which were dead a thousand years before any egg

existed. That is to say, they *do* give us reason to suppose that, if a particular egg exists, there has probably existed a hen which was at some time *near* that egg; but they give us no reason to suppose that, if a particular egg exists, there must have existed a hen which never came near that egg. They *do* give us reason to suppose that, for each egg, there has probably existed a hen, which at some time stood to the egg in question in that relation which we have observed to hold between an egg and a hen, when we observed the hen laying an egg. But they give us no reason to infer from the existence of an egg any other kind of hen: any hen which *never* stood to the egg in the relation in which we have observed that some hens do stand to eggs.

What I wish to suggest is that this condition is a universal condition for sound inductions. If the observation of β preceding α can ever give us any reason at all for supposing that the existence of A is generally preceded by that of B, it can at most only give us reason to suppose that the existence of an A is generally preceded by that of a B which stands to A in the same relation in which β has been observed to stand to α . It cannot give the least reason for supposing that the existence of an A must have been preceded by that of a B, which did *not* stand to A in the observed relation, but in some quite different one. If we are to have any reason to infer from the existence of an A the existence of such a B, the reason must lie in some different observations. That this is so, in the case of hens' eggs and hens, is, I think, obvious; and, if the rule is *not* universal, some reason should at least be given for supposing that it does apply in one case and not in another.

Having thus attempted to point out some conditions which seem to be necessary, though not *sufficient*, where observation is to give any reason for a generalisation, I may now proceed to my second preliminary question: What kinds of things do we observe?

In order to illustrate how much and how little I mean by "observation" or "direct perception," I will take as an instance a very common visual perception. Most of us are familiar with the experience which we should describe by saying that we had seen a red book and a blue book side by side upon a shelf. What exactly can we be said to observe or directly perceive when we have such an experience? We certainly observe one colour, which we call blue, and a different colour, which we call red; each of these we observe as having a particular size and shape; and we observe also these two coloured patches as having to one another the spatial relation which we express by saying that they are side by side. All this we certainly see or directly perceive *now*, whatever may have been the process by which we have come to perceive so much. But when we say, as in ordinary talk we should, that the objects we perceive are *books*, we certainly mean to ascribe to them properties, which, in a sense which we all understand, are not actually seen by us, at the moment when we are merely looking at two books on a shelf two yards off. And all such properties I mean to exclude as not being then *observed* or *directly perceived* by us. When I speak of what we *observe*, when we see two books on a shelf, I mean to limit the expression to that which is *actually seen*. And, thus understood, the expression does include colours, and the size and shape of colours, and spatial relations in three dimensions between these patches of colour, but it includes nothing else.

But I am also using observation in a sense in which we can be said actually to observe a movement. We commonly say that we can sometimes *see* a red billiard-ball moving towards a white one on a green table. And, here again, I do not mean to include in what is directly perceived or observed, all that we mean by saying that the two objects perceived are billiard-balls. But I do mean to include what (we should say) we *actually see*. We actually see a more or less round red patch moving towards a more or less round white patch; we

see the stretch of green between them diminishing in size. And this perception is not merely the same as a series of perceptions—first a perception of a red patch with a green stretch of one size between it and the white; then a perception of a red patch with a green stretch of a different size between it and the white; and so on. In order to perceive a movement we must have a different perception from any one of these or from the sum of them. We must *actually see* the green stretch diminishing in size.

Now it is undoubtedly difficult, in some instances, to decide precisely what is perceived in this sense and what is not. But I hope I have said enough to show that I am using "perceive" and "observe" in a sense in which, on a given occasion, it is easy to decide that *some* things certainly are perceived, and other things, as certainly, are not perceived. I am using it in a sense in which we do perceive such a complex object as a white patch moving towards a red one on a green field; but I am not using it in any sense in which we could be said to "perceive" or "observe" that what we saw moving was a billiard-ball. And in the same way I think we can distinguish roughly between what, on any given occasion, we perceive, as we say, "by any one of the other senses," and what we do not perceive by it. We can say with certainty that, on any given occasion, there are certain kinds of "content" which we are actually hearing, and others which we are *not* actually hearing; though with regard to some again it is difficult to say whether we are actually hearing them or not. And similarly we can distinguish with certainty in some instances, between what we are, on a given occasion, actually smelling or feeling, and what we are not actually smelling or feeling.

But now, besides these kinds of "things," "objects," or "contents," which we perceive, as we say, "by the senses," there is also another kind which we can be said to observe. Not only can I observe a red and a blue book side by side;

I can also observe myself observing them. I can perceive a red patch moving towards a white, and I can also perceive my perception of this movement. And what I wish to make as plain as I can is that my perception of the movement of a coloured patch can at least be distinguished from that movement itself. I wish to make it plain that to observe a coloured patch moving is to observe one thing; and to observe myself observing a coloured patch moving is another. When I observe my own perception of a movement, I observe something *more* than when I merely observe the movement, and something very different from the movement. I may perceive a red and a blue book side by side on a shelf; and at another time I may perceive a red ball moving towards a white. The red and the blue patch, of one shape, at rest side by side, are different from the red, of another shape, moving towards the white; and yet, when I say that both are "perceived," I mean by "perceived" one and the same thing. And since, thus, two different things may both be perceived, there must also be some difference between each of them and what is meant by saying that it is perceived. Indeed, in precisely the same way in which I may observe a spatial relation between a red patch and a blue (when I observe them "side by side") I do, when I observe my own perception of them, observe a spatial relation between it and them. I observe a distance between my perception and the red and blue books which I perceive, comparable in magnitude with the breadth or height of the red book, or the breadth or height of the blue book, just as these are comparable in magnitude with one another. And when I say I observe a distance between my perception of a red book and that red book itself, I do not mean that I observe a distance between my eyes, or any other part of what I call my body, and the red patch in question. I am talking not of my eyes, but of my actual perception. I observe my perception of a book to be near the book and further from the table, in exactly the same sense in which I observe the

book to be near the shelf on which it stands, and further from the table. And just as, if the distance between a red patch and a white is to be perceived, the red patch must be different from the white, so, if I perceive a certain distance between my perception and the red patch, my perception must be different from the red patch which I perceive.

I assume, then, that we observe, on the one hand, coloured patches of certain shapes and sizes, and their spatial relations to one another, together with all the other kinds of "contents," which we should usually be said to perceive "through the senses." And, on the other hand, we also sometimes observe our own perceptions of such "contents" and our thoughts. And these two kinds of "content" are different from one another: my perception of a red patch with gold letters on it, is not itself a red patch with gold letters on it: and hence, when I observe my perception of this patch, I observe something different from that which I observe when I merely perceive the patch. Either of these two kinds of "contents"—either colours, moving or at rest, sounds, smells, and all the rest—or, on the other hand, my perceptions of these—either of these two kinds, or both, might conceivably, since both are observed, give grounds for a generalisation concerning what exists. But, as I have said, if observations are to give any ground for such a generalisation, it must be assumed that what is observed *exists* or is *real*. And since, as I have insisted, when I observe my *perception* of a red patch with gold letters, on it, I observe something different from what I observe when I merely observe a red patch with gold letters on it, it follows that to assume the existence of my perception of this red and gold is *not* the same thing as to assume the existence of the red and gold itself.

But what, it may be asked, do I mean by this property of "existence" or "reality," which may, it would seem, belong to every content, which I observe, or may again belong to none, or which may belong to some and not to others? What is this

property which may belong to my perception of a movement, and yet not belong to the movement perceived, or which may again belong to the movement perceived and not to my perception of it; or which may again belong to both or to neither?

It is necessary, I think, to ask this question at this point, because there are some philosophers who hold that, in the case of some kinds of "contents," at all events, to say that they "exist" is to say that they are "perceived." Some hold that to say "A exists" is to say neither more nor less than "A is perceived"—that the two expressions are perfect synonyms; and others again would say that by "A exists or is real" we may mean *more* than that "A is perceived," but that we must at least mean this. Now, I have hitherto used the word "existence" pretty freely, and I think that, when I used it, I used it in its ordinary sense. I think it will generally have suggested to you precisely what I meant to convey, and I think that, in some cases at all events, it will not even have occurred to you to doubt whether you did understand what I meant by it. But, if these philosophers are right, then, if you *have* understood what I meant by it, I have all along been using it in a sense, which renders the end of my last paragraph perfect nonsense. If these philosophers are right, then, when I assert that what *is* perceived may yet *not* exist, I am really asserting that what *is* perceived may yet *not* be perceived—I am contradicting myself. I am, of course, quite unaware that I am doing so. But these philosophers would say *either* you are contradicting yourself, *or* you are not using the word "exists" in its ordinary sense. And either of these alternatives would be fatal to my purpose. If I am not using the word in its ordinary sense, then I shall not be understood by anyone; and, if I am contradicting myself, then what I say will not be worth understanding.

Now, with one class of these philosophers—the class to which, I think, Berkeley belongs—I think I can put myself

right comparatively easily. The philosophers I mean are those who say that it is only in the case of one particular class of "contents" (the kind of "content" which Berkeley calls "idéas") that to say "the 'content' A exists" is to say "A is perceived," and who admit that in the case of other contents—myself and my perceptions and thoughts, for example—to say that *these* exist or are real, is to say of them something different from this. These philosophers admit, that is to say, that the word "exists" has two different senses: and that in only one of these senses is it synonymous with the words "is perceived." When (they hold) I say of such a content as a red patch with gold letters on it that it "exists" I *do* mean that it is perceived: but when I say of my *perception* of such a patch that *it* exists, I *do not* mean that my perception is perceived, but something different from this. Now, it would be nothing strange that one and the same word should be used in two different senses; many words are used in many different senses. But it would, I think, be something very strange indeed, if in the case of a word which we constantly apply to all sorts of different objects, we should uniformly apply it to one large class of objects in the one sense and the one sense only, and to another large class in the other sense and the other sense only. Usually, in the case of such ambiguous words, it happens that, in different contexts, we apply it to one and the same object in *both* senses. We sometimes wish to say of a given object that it has the one property, and sometimes we wish to say of the same object that it has the other property; and hence we apply the same word to the same object, at one time in one sense, and at another in the other. I think, therefore, that, even if there were these two different senses of the word "existence," it would be very unlikely that we should not commonly, in some contexts, apply it in the sense, in which (as is alleged) it does apply to perceptions, to "contents" which are not perceptions. Indeed, I think, it is quite plain that we constantly do ask, with regard

to what is not a perception, whether *it* exists, in precisely the same sense, in which we ask, with regard to a perception, whether *it* exists. We ask in precisely the same sense: Was the Roc a real bird, or merely an imaginary one? and, 'Did Sinbad's perception of the Roc really exist, or is it a fiction that he perceived a Roc? I think, therefore, that the sense in which these philosophers admit that we do apply the word "existence" to perceptions, is one in which we also commonly apply it to "contents" other than perceptions. But, even if this is not the case, I can set myself right with them by a simple explanation. I need merely explain that the sense in which I am proposing to enquire whether a red patch exists, is precisely the sense in which they admit that my perception of a red patch does exist. And in this sense, it is plain that to suppose that a thing may exist, which is not perceived, or that it may *not* exist, although it is perceived, is at least not self-contradictory.

But there may be other philosophers who will say that, in the case of a perception also, to say that it exists or is real is to say that it is perceived—either that alone or something more as well. And to these philosophers I would first point out that they are admitting that the proposition "This perception is real" is significant. There is some sense or other in which we may say: "Alexander's perception of an elephant was real or did exist, but Sindbad's perception of a Roc was *not* real—never did exist": the latter proposition is, in some sense or other, not self-contradictory. And then I would ask of them: When they say, that to call a perception "real" is to assert that it is perceived, do they mean by this that to call it real is to assert that it is *really* perceived, or not? If they say "No," then they are asserting that to call a perception "real" is merely to say that it was perceived in the sense in which Sindbad *did* perceive a Roc: they are asserting that to call it "real" is not to say, in any sense, that it was *really* perceived: they are asserting that to call a perception "real" is to say

that it was perceived, in some sense quite other than that in which we ordinarily use the word: for we certainly commonly mean, when we say "A was perceived," that a perception of A was "real": we should commonly say that Sindbad did *not* perceive a Roc—meaning that no such perception ever did exist. I do not think they do mean this; and, in any case, if they do, I think it is plain that they are wrong. When we say that a perception is "real," we certainly do not mean merely that it is the object of another perception, which may itself be quite unreal—purely imaginary. I assume, therefore, that when they say: To call a perception "real" is to say that it is perceived: they mean, what we should naturally understand, namely, that: To call it "real" is to say that it is *really* perceived—to say that it is the object of another perception, which is also *real* in the same sense. And, if they mean this, then what they say is certainly untrue. Their definition of reality is circular. It cannot be the case that the *only* sense in which a perception may be said to be real, is one in which to call it so is to assert that not it alone, but another perception is real also. It cannot be the case that the assertion "A is real" is *identical* with the assertion "A and B are both real," where A and B are different, and "real" is used in the same sense as applied to both. If it is to be true that the assertion "A is real" *ever*, in any sense, includes the assertion "A is *really* perceived," there must be another sense of the word "real," in which to assert "A is real" is to assert *less* than "A is *really* perceived"—the sense, namely, in which we here assert that the *perception* of A is real.

We find, therefore, that the other class of philosophers were at least right in this: they were right in allowing that the sense in which we commonly say that our perceptions exist is one in which "exist" does not include, even as a part of its meaning, "is perceived." We find that there is a common sense of the word "existence," in which to say "A exists" must mean *less* than "A is *really* perceived": since, otherwise, the only

possible definition of the word "existence" would be a circular definition. And I may point out that two other definitions, which have been sometimes suggested by philosophers as giving what we commonly mean by "reality" or "existence" are vitiated by the same fault—they also are circular. Some philosophers have sometimes suggested that when we call a thing "real," we mean that it is "systematically connected" in some way with other things. But, when we look into their meaning, we find that what they mean is (what, indeed, is alone plausible)—systematically connected with other *real* things. And it may possibly be the case that we sometimes use the word "real" in this sense: but, at least, it must be certainly the case, that, if we do, we *also* use it in another and simpler sense—the sense in which it is employed in the proposed definition. And other philosophers have suggested that what we mean by "real" is—"connected in some way with a purpose—helping or hindering, or the object of a purpose." But if we look into their meaning, we find they mean—connected with a *real* purpose. And hence, even if we do sometimes mean by "real," "connected with a *real* purpose," it is plain we also sometimes mean by "real" something simpler than this—that, namely, which is meant by "real" in the proposed definition.

It is certain, therefore, that we do commonly use the word "existence" in a sense, in which to say "A exists" is *not* to say "A is perceived," or "A is systematically connected with other real things," or "A is purposive." There is a simpler sense than any of these—the sense in which we say that our own perceptions do exist, and that Sindbad's perceptions did not exist. But when I say this, I am by no means denying that what exists, in this simple sense, may not always *also* exist in all the others; and that what exists in any of them may not *also* always exist in this. It is quite possible that what exists is always *also* perceived, and that what is perceived always *also* exists. All that I am saying is that, even if this is so, this proposition is significant—is not merely a proposition about the

meaning of a word. It is not self-contradictory to suppose that some things which exist are not perceived, and that some things which are perceived do not exist.

But, it may be asked: What is this common simple sense of the word "exists"? For my own part, it seems to me to be so simple that it cannot be expressed in any other words, except those which are recognised as its synonyms. I think we are all perfectly familiar with its meaning: it is the meaning which you understood me to have throughout this paper, until I began this discussion. I think we can perceive at once what is meant by asserting that my perception of black marks on a white ground is "real," and that no such perception as Sindbad's of a Roc ever was "real": we are perfectly familiar with the property which the one perception is affirmed to possess, and the other to be without. And I think, as I have said, that this property is a simple one. But, whatever it is, this, which we ordinarily mean, is what I mean by "existence" or "reality." And this property, we have seen, is certainly neither identical with nor inclusive of that complex one which we mean by the words "is perceived."

I may now, then, at last approach the main question of my paper. Which among the "contents" which I observe will give me reason to suppose that my observation of some of them is generally preceded or accompanied or followed by the existence of certain particular perceptions, thoughts or feelings in another person? I have explained that the "contents" which I actually observe may be divided into two classes: on the one hand, those which, as we commonly say, we perceive "through the senses": and, on the other hand, my perceptions of these last, my thoughts, and my feelings. I have explained that if any of these observed contents are to give reason for a generalisation about what exists, *they* must exist. And I have explained that with regard to both classes of "contents" I am using the word "exist" in precisely the same sense—a sense, in which it is certainly not self-contradictory to suppose that what *is* perceived,

does not exist, and that what is *not* perceived, does exist; and, in which, therefore, the assumption that a red patch with gold letters on it exists, is a *different* assumption from the assumption that my *perception* of a red patch with gold letters on it exists; and the assumption that my *perception* of a red patch with gold letters on it exists, is a *different* assumption from the assumption that a red patch with gold letters on it exists.

What, then, that we observe, can give us any reason for believing that anyone else has certain particular perceptions, thoughts, or feelings? It has, I think, been very commonly assumed that the observation of my own perceptions, thoughts, and feelings, can, by itself, give me such a reason. And I propose, therefore, to examine this assumption. If, as I hope to show, it is false; it will then follow, that if our own observations give us any reason whatever, for believing in the existence of other persons, we must assume the existence, not only of our own perceptions, thoughts, and feelings, but also of some, at least, among that other class of data, which I may now, for the sake of brevity, call "sense-contents"; we must assume that some of them exist, in precisely the same sense in which we assume that our perceptions, thoughts, and feelings exist.

The theory which I propose to examine is, then, the following. My observation of my own thoughts, feelings, and perceptions may, it asserts, give me some reason to suppose that another person has thoughts, feelings, and perceptions similar to some of mine. Let us assume, accordingly, that my own thoughts, feelings, and perceptions do exist; but that none of the "sense-contents," which I also observe, do so. Where, among my perceptions am I to look for any which might conceivably give me a reason for supposing the existence of other perceptions similar to my own? It is obvious where I must look. I have perceptions which I call perceptions of other people's bodies; and these are certainly similar in many respects to other perceptions of mine—to the perceptions which I call perceptions of my own body. But I also observe that certain

kinds of perceptions of my own body are preceded by certain other perceptions, thoughts, or feelings of mine. I may, for instance, observe that when I perceive my hand suddenly catch hold of my foot in a particular way, this perception was preceded by a particular kind of feeling of pain. I may, perhaps, observe this often enough to justify the generalisation that the perception of that particular motion of my body is generally preceded by that particular feeling of pain. And in this way I may perhaps have reason for quite a number of generalisations which assert that particular kinds of perceptions of my own body are generally preceded by other particular kinds of perceptions, thoughts, or feelings of my own.

But I may also, no doubt, have the perception, which I call the perception of another person's hand catching hold of his foot, in a manner similar to that in which I have perceived my own hand catch hold of my own foot. And my perception of another person's hand catching hold of his foot may undoubtedly be similar in many respects to my perception of my own hand catching hold of my own foot. But I shall not observe the same kind of feeling of pain preceding my perception of *his* hand catching hold of his foot, which I have observed preceding my perception of *my* hand catching hold of my foot. Will my generalisation, then, give me any reason to suppose that nevertheless my perception of his hand catching hold of his foot is preceded by a similar feeling of pain, not in me but in him? We undoubtedly do assume that when I perceive another person's body making movements similar to those which I have observed my own body making, this perception has generally been preceded by some feeling or perception of his similar to that which I have observed to precede my perception of similar movements in my own body. We do assume this; and it is precisely the kind of generalisation, which, I have insisted, must be admitted to be true. But my present question is: Will such observations as I have described give any reason for thinking any such generalisation true? I think

it is plain that they will not give the slightest reason for thinking so. In the first place, all the perceptions which I call perceptions of another person's body differ very considerably from any of those, which I call perceptions of my own. But I am willing to waive this objection. I am not offering any theory as to what degree of likeness is *sufficient* to justify a generalisation: and therefore I will allow that the degree of likeness *may* be sufficient. But there remains an objection which is, I think, quite fatal to the proposed inference. This objection is that the inference in question plainly does not satisfy the third condition which I suggested above as *necessary*, wherever any generalisation is to be justified by observation. I am willing to allow that my observations of the fact that my perception of a certain movement in my own body is preceded by a certain feeling of pain, *will* justify the generalisation that my perception of any such movement, whether in my own body or in that of another person, is generally preceded by a similar feeling of pain. And I allow, therefore, that when I perceive a certain movement in another's body, it *is* probable that the feeling of pain exists, though I do not perceive it. But, if it is probable that such a feeling of pain exists, such a feeling must stand *in the same relation* to my perception of the movement in another person's body, in which a similar feeling of pain has been observed by me to stand to my perception of such a movement in my own body. That is to say the only kind of feeling of pain, which my observations do justify me in inferring, if (as I admit they may) they justify me in inferring any at all, is a feeling of pain of *my own*. They cannot possibly justify the belief in the existence of any such feeling *except* one which stands to my perception in the same relation in which my feelings do stand to *my* perceptions—one, that is to say, which is my own. I have no more reason to believe that the feeling of pain which probably precedes my perception of a movement in another person's body can be the feeling *of another person*, than, in my former example, I had reason to suppose that the

hen, whose existence probably preceded that of a given egg, could be a hen, which had never been near the egg in question. The two cases are exactly analogous. I observe a feeling of pain of *my own* preceding a perception of *my own*. I observe the two, that is to say, as standing to one another in those relations (whatever they may be) in which any perception of mine stands to any other thought, perception or feeling of mine, and which are, at all events, different from any relation in which a perception or feeling of another person can stand to one of mine. I never perceive the feeling and the perception as standing in any other relation. In any case, therefore, where I do observe something like the perception, but do not observe the feeling, I can only be justified (*if* justified in inferring any feeling at all), in inferring an unperceived feeling of *my own*.

For this reason I think that no observations of my own perceptions, feelings or thoughts can give me the slightest reason for supposing a connection between any of them and any feeling, perception, or thought in another person. The argument is perfectly general, since *all* my perceptions, feelings and thoughts do have to one another those relations, in virtue of which I call them mine; and which, when I talk of a perception, feeling or thought as being *another person's*, I mean to say that it has *not* got to any of mine. I can, therefore, merely from observation of *this* class of data never obtain the slightest reason for belief in the existence of a feeling, perception, or thought which does *not* stand in these relations to one of mine—which *is*, that is to say, the feeling, perception or thought, of another person. But how different is the case, if we adopt the hypothesis, which I wish to recommend—if we assume the existence of that other class of data which I have called "sense-contents"! On this hypothesis, that which I perceive, when I perceive a movement of my own body, is *real*; that which I perceive when I perceive a movement of another's body, is *real* also. I can now observe not merely the relation between my *perception*

of a movement of my body and my own feelings, but also a relation between a *real* movement of my body and my own feelings. And there is no reason why I should not be justified in inferring that another person's feelings stand *in the same relation* to the real movements of his body, in which I observe my own feelings to stand to similar real movements of mine.

But there is another argument which may still be urged by those who hold that my own perceptions, thoughts, and feelings, by themselves, may be sufficient to justify a belief in the existence of other persons. It may be said: "Our observation of our own perceptions may be sufficient to *verify* or *confirm* the hypothesis that other persons exist. This hypothesis is one which "works." The assumption that other persons have particular thoughts, feelings, and perceptions enables us to predict that they will have others and that our own perceptions will be modified accordingly: it enables us to predict future perceptions of our own; and we find that these predictions are constantly verified. We observe that we do have the perceptions, which the hypothesis leads us to expect we should have. In short, our perceptions occur just as they would do, *if* the hypothesis were true; our perceptions behave *as if* other persons had the perceptions, thoughts, and feelings which we suppose them to have. Surely, then, they confirm the truth of the hypothesis—they give some reason to think it probably true?"

All this, which I have supposed an opponent to urge, I admit to be true. I admit that the fact that an hypothesis works may give some reason to suppose it true. I admit that my perceptions occur just as they would do, if other people had the perceptions which I suppose them to have. I admit that that assumption enables me to make predictions as to future perceptions of my own, and that I observe these predictions to come true. I admit all this. But I admit it only in a sense in which it in no way conflicts with the

position which I am maintaining. The words, which I have put into the mouth of a supposed opponent, may, in fact, mean three different things, which it is worth while to distinguish. In two of those meanings, which I shall admit to be true and which are what make them seem plausible, they do not deny what I assert. Only in the third sense are they an objection to my position: and in that sense they are false.

One of the meanings which I admit to be true is as follows:—I have not only admitted but insisted that some of my perceptions are just such as would occur if another person had certain particular feelings: I have insisted that I should not have just those perceptions which I do have, unless some other person had certain feelings and perceptions which I suppose him to have. And I admit further that the fact that I have one of the perceptions in question—for instance, that of another person's hand catching hold of his foot—this fact, *together with* the true assumption that I should not have this perception, unless some other person felt pain, will justify the assertion that another person has felt pain. In this sense, I admit, the fact that I perceive what I do perceive will give me reason to suppose that another person has felt pain. And, on the other hand, I also admit that the fact that I have this perception, *together with* the true assumption that when I have it another person has felt pain, may help to justify the assumption that the perception in question is one which I should not have unless another person had felt pain—it helps to justify the generalisation that certain of my perceptions are just what would occur, *if* another person had felt pain. In general terms, that is to say, I admit that the occurrence of B, *together with* the assumption that B is just the sort of thing which would occur if A existed, will justify the assertion that A exists in that particular instance. And I also admit that the occurrence of B, *together with* the assumption that A exists in that particular instance, may

help to justify the assumption that B is just the sort of thing which would exist, if A existed. In other words: When it is said that the observation of B's existence confirms or verifies the assumption that A exists, either of two things may be meant. It may be meant that, assuming B to be the sort of thing which would exist if A existed, the observation of B confirms the assumption that A exists *in this particular instance*. Or, on the other hand, it may be meant that, assuming A to exist in this particular instance, the observation of B may confirm the generalisation, that B is just the sort of thing which would exist, if A existed. *Either* the one *or* the other of these two things is, I think, what is generally assumed, when it is assumed that what we do observe confirms or verifies the assumption that there exists some particular thing which we don't observe. And I am admitting that both these assumptions are true.

But neither of them conflicts in any way with the position I am maintaining. What I am maintaining is that no observation of my own perceptions, *by itself*, can confirm the generalisation that any one of them *is* just what would occur if another person had a particular feeling. I admit this generalisation to be true; and I admit that my observation of my own perceptions and feelings may give me *reason* to suppose that *if* another person has certain perceptions or feelings *he* will also have certain others. What I deny is that they give me the slightest reason to suppose that the existence of any such feeling or perception in another has any connection with the existence of any perception *of my own*—to suppose that any perception of my own is the sort of thing which would occur *if* another person had a particular feeling. What, therefore, my opponent must affirm is that the observation of a perception of my own, *without* the assumption (which Reid makes) that in that particular instance any feeling or perception of another person, of any kind whatever, has preceded it, may give me reason to suppose that that perception

of my own is of a kind which is generally preceded by a particular kind of feeling in another person. And this, I think, is plainly false.

But there is yet a third thing which may be meant, and which I am willing to admit may be true. It may be said: "I believe many generalisations of the following kind. I believe that when I have a perception A, some other person has generally had a feeling X; I believe that the existence of the feeling X is generally followed, in the same person, by that of the feeling Y; and I believe also that when another person has the feeling Y, I generally have the perception B. I believe all this." And it must, I think, be admitted that we do believe generalisations of this kind, and generalisations in which there are not merely two steps between A and B, but a great number of steps. "But, then," it may be said, "my belief in this generalisation causes me, when I observe my perception A, to expect that I shall have the perception B; and such expectations, I observe, are constantly realised." And this also, I think, must be admitted to be true. "But, finally," it may be said, "beliefs which produce expectations which are constantly realised are generally true. And hence the fact that these beliefs of mine about the connection of feelings in other persons with perceptions of my own do lead to expectations which are realised, gives me reason to suppose that these generalisations are true and hence that other persons do have particular kinds of feelings." And I am willing to admit that this also is true. I am willing to admit that true predictions can, as a rule, only be produced by true beliefs. The generalisation that this is so, is, indeed, one which can only be justified by the observation of beliefs, which are, in some way, independently proved to be true; and hence, if it is to be justified, without assuming the existence of anything other than my own perceptions, thoughts, and feelings, it can only be justified by my observation that beliefs with regard to the manner in which *these* succeed one another, generally lead to true predic-

tions. Whether the observation of such beliefs *alone* could give sufficient reason for it, is, I think doubtful; but I am willing to admit that it may be so. One thing, however, is, I think, quite plain: namely, that this generalisation "Beliefs which lead to true predictions are generally true" cannot be true, *unless* some other of the "contents" which I observe, beside my own perceptions, thoughts, and feelings, do exist. That is to say, in giving a reason for supposing the existence of other people, this generalisation also gives a reason for the very theory which I am advocating, namely, that some of those data which I have called "sense-contents" do exist. It does this, because it is quite certain that beliefs in generalisations about the existence of sense-contents *can* (and do) constantly lead to true predictions. The belief that when I have observed a fire of a certain size in my grate, something similar to what I have observed will continue to exist for a certain time, can, and constantly does, lead to the true prediction that, when I come back to my room in half an hour's time, I shall observe a fire of a certain size still burning. We make predictions on such grounds, I think, every day and all day long. And hence unless such beliefs as that what I observe, when I see a fire burning, *does* exist, *are* true, we certainly have no reason to suppose that beliefs which lead to true predictions are generally true. And hence on this hypothesis also it remains true that, unless some of the contents which I observe *other* than my own perceptions, thoughts, and feelings, do exist, I cannot have the slightest reason for supposing that the existence of certain perceptions of my own is generally connected with that of certain perceptions, thoughts, or feelings in any other person.

I conclude therefore that, unless some of the observed data which I have called sense-contents *do* exist, my own observations cannot give me the slightest reason for believing that anybody else has ever had any particular perception, thought, or feeling. And, having arrived so far towards an answer to

my first question: How do we know that any other persons exist? I may now point out that precisely the same answer must be given to my second question: How do we know that *any* particular kind of thing exists, other than ourselves, our perceptions, thoughts, and feelings, and what we directly perceive? There is a view concerning what exists, which deserves, I think, much more respect than it generally receives from philosophers nowadays. The view I mean is the view that material objects, such as they are conceived by physical science, do really exist. It is held by some persons (and Reid is among them) that we *do* know of the existence, not only of other persons, but also of the movements of matter in space. It is held that we do know, with considerable precision, what kinds of movements of matter generally precede my perception, when I have a particular perception. It is held, for instance, that when I perceive a red and blue book side by side on a shelf, at a certain distance from me, there have existed, between two material objects, which may be called books, and another kind of material object, which may be called my eyes, certain wave-like motions of a material medium; that there have existed two different sets of waves, of which the one is connected with my perception of red and the other with my perception of blue; and that the relative heights and breadths of the two different sets of waves, and the relative velocity of their movements are very exactly known. It is held that some men have a vast amount of very precise information about the existence of objects of this kind: and I think the view that this is so deserves a great deal of respect. But what I wish now to point out is that no one's observation of his own perceptions, thoughts and feelings, can, by itself, give him the slightest reason for believing in the existence of any such material objects. All the arguments by which I have tried to show that this kind of observation alone can give me no reason to believe in the existence of any kind of perception or feeling in another person, apply, with at least equal

force, to show that it can give me no reason to believe in the existence of any kind of material object. On the other hand, if we are to admit the principle that "Beliefs which lead to true predictions, are generally true," this principle will give us at least as much reason to believe in the existence of certain kinds of material objects as to believe in the existence of other persons; since one of the most remarkable facts about beliefs in the existence of such objects is that they do so often lead to true predictions. But it must be remembered that we can have no reason for believing this principle itself, *unless* our own perceptions, thoughts and feelings are *not* the only kind of observed "content" which really does exist: we can have no reason for it, unless some such things, as what I perceive, when I see a red and blue book side by side, do really exist.

It would seem, therefore, that if my own observations do give me any reason whatever for believing in the existence either of any perception in any other person or of any material object, it must be true that not only my own perceptions, thoughts and feelings, but also *some* of the other kinds of things which I directly perceive—colours, sounds, smells, etc.—do really exist: it must be true that some objects of this kind *exist* or are *real* in precisely the same simple sense in which my perceptions of them exist or are real. Is there then any reason to think that this is not true? Is there any reason to think, for instance, that *none* of the colours which I perceive as occupying areas of certain shapes and sizes really exist in the areas which they appear to occupy? This is a question which I wished to discuss at length, because I think that it is one in which there are real difficulties. But I have given so much space to other questions, that I can only deal with it very briefly here.

Some philosophers are very fond of asserting that a colour cannot exist except when it is perceived; and it might possibly be thought that when I suggest that colours do really

exist, I am suggesting that they do exist when they are not perceived. I wish, therefore, briefly to point out that the question whether anything does exist, when it is not perceived, is one which I have not argued and shall not attempt to argue in this paper. I have, indeed, tried to show that, since "exists" does not mean "is perceived," it is, at least, conceivable that things should exist, when they are not perceived. But I have admitted that it is quite possible none *do* so: it *may* be the case that whenever a thing exists, it is *also* at the same time perceived, for anything that I have said or shall say to the contrary. I think, indeed, that, if such things as colours *do* exist, my observation of their behaviour will justify me in concluding that they also exist when I myself am, at least, not aware of perceiving them: but since I have not attempted to determine what kinds of observation are sufficient to justify a generalisation, I do not pretend to say whether this is so or not: and still less do I pretend to say whether, *if* they exist when *I* do not perceive them, we are justified in supposing that someone else must be perceiving them. The question whether anything exists, when it is not perceived, and, if so, what things, seems to me to be one which can only be settled by observation; and thus, I conceive, observation might justify us in concluding that certain kinds of things—pains, for example, do *not* exist, when they are not perceived and that other kinds of things—colours, for example, *do* exist, when they are not perceived. The only way, in which, so far as I am aware, the theory I am advocating does conflict with ordinary Idealistic conclusions, is that it does suggest that things, which are *not* "spiritual," do *sometimes* exist, as really and as truly, as things which are.

The theory, therefore, that nothing exists, except when it is perceived, is no objection (even if it be true) to the supposition that colours do exist. What objections are there to this supposition? All serious objections to it are, I think, of one type. They all rest upon the assumption that, if a certain kind of

thing exists at a certain time in a certain place, certain other kinds of things cannot exist at the same time in the same place. They are all, that is to say, of the same type as Berkeley's argument: that, though the same body of water may *appear* to be simultaneously both hot and cold (if one of the hands we plunge into it is warm and the other cold), yet the heat and the cold cannot both *really* be in the same body at the same time. And, it is worth noticing, that anyone who uses this argument must admit that he understands what is meant by "really existing in a given place," and that he means by it something *other* than "being perceived as in a given place." For the argument itself admits that *both* the heat *and* the cold *are* really *perceived* as being in the same place, and that there is no difficulty in supposing that they are so; whereas it urges that there *is* a difficulty in supposing that they both *really exist* in it.

Now there is one obvious defect in this type of argument, if designed to prove that *no* sensible quality exists at any place where it is perceived as being—a defect, which Berkeley himself admits in his "Principles," though he omits to notice it, where he repeats the argument in his "Hylas." Even if we assume that the heat and the cold cannot *both* exist in the same place (and I admit that, in this case, the contrary assumption does seem repugnant to Common Sense), it does not follow that *neither* exists there. That is to say this type of argument, even if we grant its initial assumption, will only entitle us to conclude that *some* sensible qualities which we perceive as being in a certain place at a certain time, do not exist in that place at that time. And this conclusion, I am inclined to think, is true. In the case, for instance, of the so-called "images" which we perceive in a looking-glass, we may very readily admit that the colours and shapes which we perceive do *not* exist at the places where they appear to be—namely at various distances behind the glass. But yet, so far as I can see, we have no reason whatever for supposing that they

do not, *except* the assumption that our observations give us reason to believe that *other* sensible qualities *do* exist in those positions behind the glass; and the assumption that *where* these *other* sensible qualities do exist, those which we see in the glass do *not* exist. I should, therefore, admit that *some* sensible qualities which we perceive as being in certain places, *do not* exist in those places, while still retaining my belief that others do. And *perhaps* this explanation is the one which should also be adopted in the case of sensible qualities which appear to be at a great distance from us. When, for instance (as we say), "we see the moon," *what* we perceive (if the moon be full) is a round bright silver disc, of a small size, at a place very distant from us. Does that silver disc exist at that place? With what suppositions does the assumption that it *does*, conflict? Only, so far as I can see, with the supposition that the place in question is *really* occupied by a body such as science has taught us to suppose that the moon *really* is—a spherical body immensely larger than objects, in comparison with which the silver disc which we perceive is small: *or else* with the supposition that the place in question is really occupied by some part of our atmosphere, or some part of the medium which science supposes to exist between our atmosphere and the moon: *or else* with the supposition that the place in question is really occupied by what we might see, if the moon were nearer to us by many thousands of miles. Unless we suppose that some other object *is* in the place, in which the silver disc appears to be, and that this object is of a kind which cannot occupy the *same* place which is occupied by a silver disc, we have no reason to suppose that the silver disc does *not* really exist in the place where it appears to be. And, in this case, we *perhaps* have reason for both suppositions and should therefore conclude that the silver disc, which we perceive, does not exist in any real place.

Part, therefore, of these objections to our theory may, I think, be met by admitting that *some* of the sensible qualities

which we perceive do not exist at the places where they appear to exist, though others do. But there is, I think, another class of cases, in which we may be justified in denying that two things which (it is asserted) cannot occupy the same space, really cannot. I will take an instance which is, I think, typical. When we look at a drop of blood with the naked eye, we perceive a small red spot, uniformly red all over. But when (as we say) we look at the *same* object under a microscope of a certain power, I am informed that we see a much larger spot, of similar shape, indeed, but *not* uniformly red—having, in fact, small red spots at different positions in a yellowish field. And if we were again to look at the *same* object through a microscope of much higher power still, we might perceive yet a third different arrangement of colours. Is there any fatal objection to supposing that all *three* appearances—the uniform red spot, the yellowish field with reddish spots in it, and the third, whatever that may be—do all really occupy the same real spatial area? I cannot see that there is. We are familiar with the idea that a given spatial area may contain parts which are invisible to us. And hence, I think, it is quite conceivable that parts of a given area may be *really* occupied by one colour, while the whole is *really* occupied by another. And this, I think, is what we actually *do* believe in many cases. At all events, we certainly believe that the area which appears to be occupied by one colour really is *the same area* as that which appears to be occupied by another. And, unless we assume that the area, in both cases, really is the same, we can certainly have no reason to deny that each colour does really occupy the area which it appears to occupy.

For these reasons I think that the difficulties in the way of supposing that *some* of the sensible qualities which we perceive as being in certain places, really exist in the places in which we perceive them to be, are not insuperable. I have indeed not done justice to these difficulties; but then, neither have I done

justice to what is to be said on the other side. At all events, I think it is plain that we have no reason to assert, in any case whatever, that a perceived colour does *not* really exist in the place where it is perceived as being, *unless* we assume that that very same place really is occupied by something else—*either* by some different sensible qualities *or* by material objects such as physical science supposes to exist. But what reason can we give for such an assumption? I have tried to show that our own observations can give us none, *unless* we assume that some of the sensible qualities, which we observe as occupying certain places, do really exist in those places. And, if this is so, then we must admit that neither he who believes (with Reid) in the existence of other minds and of matter also, nor he who believes in the existence of other minds and denies that of matter, can have, in his own observations, the slightest reason either for his assertion or for his denial: we must admit that he can have no reason for either assertion or denial, except one which consists in the assumption of the existence or non-existence of something which he does *not* observe—something, therefore, of the very same kind as that for which he gives it as a reason. I am very unwilling to suppose that this is the case: I am very unwilling to suppose that he who believes that Sindbad the Sailor really saw, what the “Arabian Nights” represent him as seeing, has just as good reason (so far as his own observation goes) for believing this as he who denies it has for denying it. Still this may be the case. We *must*, perhaps, be content to assume as certain that for which our observation gives no reason: to assume such propositions as that Sindbad did *not* see a Roc, and that you *do* hear my voice. But if it is said that these things are certain; then it also appears to me to be certain that the colours which I perceive do exist (*some* of them) where I perceive them. The more I look at objects round me, the more I am unable to resist the conviction that what I see does exist, as truly and as really, as my perception of it. The conviction is overwhelming.

This being, then, the state of the case, I think I may at least plead that we have grounds for suspense of judgment as to whether what I see does *not* really exist; grounds, too, for renewed enquiry, more careful than such enquiry has sometimes been in the past.

IV.—IS THE CONCEPTION OF "GOOD" UNDEFINABLE?

By J. SOLOMON.

Is "Good" undefinable? Is it a mere matter of sentience, of immediate sensuous cognition and recognition? a quality of the same order as "yellow"? So we are assured in Mr. Moore's recent, very confident, work, *Principia Ethica*. I cannot throw overboard so lightly the wisdom of ages. I long ago learnt from Plato and Aristotle to view the cognition or perception of "good" as a mark of a higher than the merely sensuous life: and though I admit that Plato and even Aristotle did little to develop and follow up this idea, I have no doubt that in it they laid a sound and lasting foundation, and that all truly valuable ethical speculation from their day to our own has really built on this corner-stone.

At the same time I am ready to grant that—taking the ordinary shallow traditional view of definition with $A = B + C + D$ for its type (though I doubt if such definitions are much made or approved outside of Kindergartens)—"good" is an undefinable or, as Sidgwick says, an unanalysable notion. But, in agreement with and in development of my fathers in philosophy and the fathers of all philosophy, I ask: What are the conditions implied in my ability to apply the word "good" to anything? Is it mere immediate inexplicable congenital sensuous capacity, such as is involved in the cognition and recognition of "yellowness" or—to take a more appropriate illustration—of pleasantness? Is anything less involved in it than the full capacity of man, the capacity to remember, to anticipate, to construct? Why, if "good" has the same obviousness and simplicity as "yellow," do we have the secular disputes as to whether some kinds of things are good or not?

Mr. Moore would say that the disputes only arise because of the difficulty of *applying* the most general principles; that the most general principles are obvious, unmistakable, self-evident. Well, what principle can be more general than that "Pleasure is good"? Yet in the face of the age-long disputes as to this principle, we can hardly call either its truth or its falsehood self-evident. Perhaps I can illustrate my meaning in the following way: Symmetry, we must admit, is immediately recognisable; supposing it to be analysable, yet we certainly recognise it without analysis; it is recognised even by those who are perhaps altogether incapable of analysis, certainly of analysing the particular case before them. But do we admit for these reasons a sixth or twentieth "sense," a sense of Symmetry? Do we not rather point out that the cognition of symmetry involves a considerable mental development, a power of systematic attention altogether wider, higher, later than mere sensation or sensuous cognition? Even more palpably is this the case with the cognition of "good."

With this view, as far as I can understand, Sidgwick would have agreed. At least everywhere in his *Methods of Ethics* he speaks of the moral judgment as "rational"; and I cannot think that by rationality he simply intended consistency. It is a pity he did not expressly discuss the point; but apparently he thought himself absolved from doing so in a work of such limited scope as his *Methods*. But anyhow he is so good an Aristotelian that he never doubts the distinction of Good and Bad to be due to the Reason, and even to the Practical Reason—though on that mysterious faculty he has as little to say as Aristotle himself. In fact, he perhaps understood it even less than Aristotle. For he considers propositions about Good and Bad to be properly qualified as True or False; Mr. Moore is in accordance with him here. I cannot myself see how this is consistent with the distinction we all make between the "is" and the "ought to be." What definition can we give of "truth" except that it is identical with or represents what *is*?

Mr. Moore is justly severe on what he (by a somewhat strained employment of an already hard-worked word) calls the "naturalistic" fallacy, that is the identification of "good" with some quality of existent things. Because to some sort of existent things we undoubtedly apply the predicate "good," therefore (it is thought) the characteristic quality of each such sort is what we mean by "good"; but, as Mr. Moore well points out, we make nonsense of predication if we take it to mean that subject and predicate are identical; predication itself implies that they are not. I agree with all this. But does not Mr. Moore himself fall into the pit he has so carefully indicated, when he makes "good" an objective quality in regard to which we may be in error or correct? The mistake I am speaking of seems to me to have been signalled already (in a style, it is true, so archaic as not easily to be understood) by Hobbes, *Lev.*, Part I, ch. 4, "The names of such things as affect us, that is which please and displease us, because all men be not alike affected with the same thing . . . are of inconstant signification. . . . And therefore in reasoning a man must take heed of words which besides the signification of what we imagine of their nature have a signification also of the nature, disposition, and interest of the speaker: such as are the names of Virtues and Vices; for one man calleth Wisdom what another calleth Fear: and one Cruelty what another Justice." "Virtuous" and "Vicious," "Good" and "Bad" are in fact eulogistic and dyslogistic epithets. To the Englishman "genuinely English" is something praiseworthy, to the German "echt-brittisch" implies reproach; and yet as to the objective or "natural" qualities connoted by the words Englishman and German may be in agreement; in fact, unless one or the other is in error or fails of the truth, they must be in agreement. But as to the *valuation* of the qualities I see no reason to assume that Englishman and German will ever be in agreement to the end of time. It is no doubt a natural ideal to form that in the end all men should come to agree in their

valuations. Mutual intercourse, the necessities of co-operation, must bring them, it is supposed, to agreement. No doubt it will bring them some way towards it; and disagreement is so unpleasing a phenomenon that we all hope for a better world in which it will disappear; though there are some people broad-minded enough to wish that the Irishman may not become altogether as the Englishman, the Japanese and the Indian altogether as the European. But in regard to the really Objective there is no need to frame ideals of a perhaps impossible unanimity. Investigation is daily creating fresh unanimities: Science, as the familiar saying goes, is of no nationality: "fire burns both here and in Persia."

"Good" in fact means "liked" or "valued" or "approved," and yet we may without inconsistency deny that all that is liked is good. (I shall presently show that the word "liked" is not altogether unexceptionable.) For "good" is that which is liked on a broad view, taking in the future as well as the present, others as well as ourselves—not a view however ideally broad, perfectly comprehensive, but the broadest the individual "liking" subject can rise to. Aristotle was therefore so far wiser than his followers down to Sidgwick in making the standard rather the judgment of the *φρόνιμος* than the decision of abstract Reason, even of Practical Reason. To speak of the "likings" of abstract Reason is unintelligible; to speak of the likings of a man, even of a perfectly wise man, is intelligible. No doubt many generations of students of Aristotle have marvelled at the uselessness of Aristotle's *κανὼν καὶ μέτρον*, and asked where his ideal *φρόνιμος* was to be found, recognised, and recognised as authoritative. The problem admits of no general solution: yet practically it is being solved every day: every day some one regulates his conduct by the actual conduct of one whom he recognises as *φρόνιμος* and "possessing authority." He recognises in his model what he himself might be and would like to be, some one who as compared with his own divided and discordant existence is "*totus teres atque rotundus*."

The model, though far above the admirer, is not above the admirer's understanding and sympathy, and this is the very cause that makes the admirer discontented with himself and stimulates him to imitate his model. Beyond our ideas and interests, beyond our ideal interests, we cannot go. As the man to whom Algebra is a riddle, a "low cunning," will not want to understand or take the pains to understand Algebra, so conduct that depends on interests that we do not share, whether from deficiencies of sense or from intellectual narrowness, will not attract us. Those whose auditory sense is so imperfect that they cannot grasp the simplest melodic combination, will see nothing to admire in the accomplished musician; those in whom ideation is so imperfect that they cannot grasp what only resembles the present in abstract and general features, or else is a complex whole in which the present is merely a part, will not strive to provide for their life in general or as a whole. This is what those who frame general formulae to express what is good (*e.g.*, Pleasure is good) lose sight of. Nothing seems more plausible than such a saying as "Pleasure is good," or even "Pleasant consciousness is the only good." The worst of it is that the more definitely we conceive it, the more it approximates to a mere tautology. A tautologous maxim can have no practical effect; and the fact is that "pleasure" or "pleasant consciousness" in its bare abstraction is something few of mankind can as much as conceive. It is "pleasures," "our pleasures," the acts and enjoyments that are pleasant to *us* that move and excite us. We speak, it is true, of the voluptuary, the votary of pleasure; but I cannot believe that the bare idea of pleasure ever excited any man.

To call a thing or action "good" demands, then, a certain comprehensiveness, a power of ideation. I do not think we can improve upon the Greek antithesis between the *ἡδὺν*—*τὸ παρὸν ἡδὺν*—and the *ἀγαθόν*. The Pleasant is what is felt as such in the moment of enjoyment; and strictly speaking all *general* statements about it, such as "food is pleasant," "music is pleasant,"

are incorrect, they are predictions that when actually eating food, when actually hearing music, we shall be pleased; and as predictions they often turn out to be entirely false. But the *ἀγαθόν* is relatively permanent, and the more permanent the more comprehensive it is. What is good to us depends, as Aristotle said, on Character and Principle; these are to us the conditions of recognising a "good" at all. Our advance on Aristotle—and I do not doubt there has been a considerable advance—depends on our psychological advance, on our understanding better than he did what "character" and "principle" are, by what stages they mature, and how their fixing and ripening is affected by external and specially by social conditions. But as we are unable to form an ideal of perfect character and principle, as it is by no means clear that the ideal need or can be the same for all men, for all classes, for all races, for all regions, it follows that an ideal and perfect presentment of "the good" cannot be made by us, and is perhaps in its nature unattainable and fantastic. But that "good" is a *relation* to character, not a quality perceived by sense I would certainly assert. This, I suppose, is what Aristotle meant when, after allowing that "good" must have some common meaning however diverse the objects to which we applied the adjective, he suggested that this community lay not in the derivation of those objects from a common root or in their co-operation to a common end, but in an identical relation (*ἁπαλογία*) as the relation—to use his own example—of the eye to the body is the same as the relation of the intellect to the soul. "Good" is that which satisfies the character, which is the predicate in the principle. It is permanently satisfying so far as "character" and "principle" are permanent, so far as they truly deserve their name, so far as they are mature.

The mark of a formed character, says Aristotle, is that the man does not repent. Repentance is not mere pain, though the pain may happen to be causally connected with a previous act. Paul de Florac, in *The Newcomes*, tells Clive—"I have not a

sou of repentance in my pocket. I have been sorry, yes—but it was because odd came up in place of even or the reverse." Gambling to him is good, he is "*joueur*" by nature," loss of money but an extrinsic though an unpleasant incident; he would sooner gamble and lose than not gamble at all—as he himself tells his friend. I have said that in regard to the formation and creation of character Aristotle's psychology seems to me slight and rudimentary. But his conception of character seems to me as definite as it is vivid. When we are referring to character, or (to put it in the concrete) when we are referring to a subject that has attained ordinary human maturity—(I say "ordinary," because some adults matured in years remain mentally and morally infants)—the words "pleasant" and "like" become in regard to matters of importance inapplicable and misleading. It is misleading to say that the truthful man finds truth-telling pleasant: it is too feeble an expression to say that he "likes" truth-telling, "dislikes" falsehood. What characterises him is an intense and abiding tendency. About such a tendency there are two things to notice. First, it is not specialised but highly general and comprehensive, a principle to be realised in circumstances infinite in number and infinitely differing. Next, it embraces the man's whole being, to speak metaphorically; it is not a mere taste or impulse to be overcome by the impulsive power of "some new affection," or in moments of deliberation to be weighed against such new impulse and rejected or followed accordingly. It is the man himself: it is not weighed against, it itself weighs, the new impulse, exercises authority over it.

"Good" is what such an abiding tendency takes for its object—I mean of course "morally good." It is another part of my difference from Mr. Moore that I do not feel compelled to analyse "good conduct" into "good" and "conduct," and to disparage as poor and illogical thinkers those who venture to say what "good conduct" is before they are prepared to say what "good" is. I have already hinted that I do not believe

in or value the "analysis" which defines A as B+C+D, or a horse as "four legs, a head, heart, liver, &c." Doubtless it is not without reason, and more or less traceable reason, that human language applies "good" alike to wine, pictures, and conduct; but I see no reason to suppose (any more than Aristotle did) that this has happened because men started with a clear idea or perception "good," and then saw that this entered into or formed a part of the nature of such very dissimilar things as wine, pictures, and conduct. Nor do I find any attractiveness in the identification of, morally, "good" and "beautiful" which has charmed more than one eminent philosopher. Admitting that the Greek had no higher word for the morally good than *καλόν*, that we ourselves can find at times no term so appropriate as "lovely" to describe certain conduct or certain moral relations, I ascribe this simply to the fact that we contemplate such conduct or relations with admiration, and that no expression of admiration is so forcible and heartfelt as *καλόν* and "lovely." But I admit a certain analogy—an analogy that was fully to be expected—between the moral and the aesthetic sentiment. Both doubtless claim to be something more than temporary feelings, both claim to be authoritative and judges, to pass judgment of praise or disapproval on the mere feeling. The connoisseur as readily says "if you don't enjoy this picture, you ought to enjoy it," as the honest plain man says "if you don't like or feel disposed to such and such behaviour, you ought to." And because both the art connoisseur and the *φρόνιμος* do not accept but judge, we are inclined to say that they deal with the objective, that they state that which *is*, being compelled thereto by the nature of that which is, no less than the man of science is constrained by the nature of *his* objective world. "Good" seems objective, and "Beautiful" seems objective no less than "Real" is objective. But this is the "naturalistic fallacy." Neither "good" nor "beautiful" can be independent of the nature of him who applies those predicates. But "beautiful" expresses

a permanent and to some extent generalised liking which despises and tries to control the mere accidental temporary liking. In the application of "beautiful," as in the application of "(morally) good," we find permanent differences between men, at least where they differ greatly in station, race, history. I think it a false and impossible ideal that all men should apply the predicate "good" to the same things; but it is an ideal still falser and vainer that they should apply the predicate "beautiful" to the same things.

I feel that what I have above said is open to misunderstanding. To guard it from objection I wish to add that when I connect "character" with the morally good, I do not mean to say—as I admit I seem to have implied above—that nothing morally good can proceed from any but a man with a fixed character, and that virtuous. It is not so much the fixity of what we call "character" that I wish to dwell on as its complexity and comprehensiveness. First, however, by another metaphor from mechanical science I will try to convey the truth about character which is conveyed, but not without an alloy of falsehood, in the attribute "fixed." Mechanical Science attributes to a body in a certain position "stable equilibrium," not intending thereby to assert that it is absolutely immovable, but only that after disturbances (within certain limits) it returns of itself to that original position. So character is a tendency which, overcome for the moment, is re-established when the momentary disturbance has ceased. And this stability is connected with complexity and comprehensiveness. The broader tendency which we call "character" resumes its force after momentary defeat. It grips into life—the phrase is rather a Germanism—at more points, it gives order and system to impulses which are in themselves isolated and disorderly. It is of course this system which gives the characteristic we call "rationality" to conduct; so that men of different characters, whether by idiosyncrasy or by difference of race, may meet the same conjunction of circumstances quite

differently, and yet we see nothing "irrational" in the conduct of either. Of system and systematisation in matters of practice generally I may say that writers on Morals seem to me to fall greatly short of the truth in their estimate of its function and importance. They seem to regard it chiefly as satisfying an intellectual want—in the narrowest sense of the word intellectual, a want which surely must be confined to the small class whom the Greeks called *χρηιέντες*. But really systematisation is in all of us a most imperious want as regards Conduct. When Wordsworth said, "Me this unchartered freedom tires; I feel the weight of chance desires," he expressed a profound truth. But most speculators on morals have not grasped it. That men should acknowledge "obligation," submit to "authority," seems to them so odd that they either feel compelled to explain it as the result of brute force—inventing history with this purpose when records are wanting—or else to attribute it to a scientific instinct which seems to be present, even if we include the feeblest manifestations of it, in but a small minority of mankind. But the fact is that human timidity and weariness, seeking a refuge from the peril and distraction of its own desires, begs for obligation and supplicates for authority. Human nature loves law, asks really only for change of law, change of masters, when seemingly asking for freedom, but would soonest of all keep its law unchanged. It may well be that—as Bagehot said—it takes ages of hard and strenuous discipline to get a definite code generally respected and observed. I am far from denying this. I only assert that a natural tendency and a keenly-felt want conspire to make men obey *some* code; the discipline is needed to give that code power as well as authority among men with whom impressions are vivid and imperious, ideas faint and feeble.

Moral Philosophy seems to me to have always suffered from excess of abstraction. Höfding, who strongly asserts the subjectivity of "good," and with whom I am in general agreement,

lays down that there are three stages in human conduct—the first in which no higher authority is recognised than that of the momentary want, in which in fact there is no authority at all, but the man does without control or the suspicion of a possible control just what the moment prompts him to do; this is a pre-ethical stage. Next comes the stage where the control of the momentary impulse comes from the idea of and interest in the individual's life as a whole; this is Egoistic Morality—a genuine morality, and in fact the actual source of much that we think excellent in conduct, though also the source of much that we think positively immoral. Lastly comes a Morality which controls and judges the momentary impulse by the idea of and interest in a Society—whether of the whole human race, or of a nation, or of a sect or class—a Society in which the individual member feels himself merely a part, and quite possibly a part much less valuable than other parts, and materially less valuable than all of them together. One's Momentary Satisfaction, one's Personal Well-Being, Social Well-Being—these, says Höfding, are the three possible Ends of Conduct. To those capable of the idea of the third it presents itself as authoritative over the second, while to those who cannot rise above the second this presents itself as authoritative over the first. But no reasoning—says Höfding, reminding us in this of Aristotle—can change the Egoist into a Utilitarian, or even the Cyrenaic (maintaining the sovereignty of the momentary Pleasure) into an Egoist. With all this I substantially agree. The fault or deficiency lies in the extreme abstractness. What is Well-Being or *Wohlfahrt*—whether Personal or Social? To one man it is a life of study, to another a life of exploration, to another a life of commerce, or manufacture, or invention—and there must be many other lives. In laying down conditions of Personal Well-Being, and even more in laying down conditions of Social Well-Being, which is itself largely dependent on this very difference in men's idiosyncrasies, we must never forget these differences.

It is of course a commonplace that individual Well-Being is not adequately provided for by "food, a coat, and a house," as Plato jestingly suggests. The appetites for knowledge, power, love and many other things are not thus provided for. But while we all require this with regard to an individual, we are all disposed to take much more limited and materialistic views in regard to Social Well-Being. Even Burke regarded with a comical awe the wish, surely not so very sublime, of Henry IV of France, that "every peasant might have a fowl in his pot." Here I have much pleasure in owning my sympathy with the book, my differences from which first prompted the present paper, I mean Mr. Moore's *Principia Ethica*. I think he does well to dwell on the variety of things good, on the impossibility of finding some objective characteristics common to them all. All I contend for is the general relativity of "good." Nothing is good except so far as I or some other find it "good" (how finding a thing "good" and finding it "pleasant" differ I have already tried to show, and I shall not return to it). It does not follow that I must deny to be good what *I* do not find good. If I am an Egoist I shall deny it to be good—here I disagree with Mr. Moore. On the contrary, if I have reached the Utilitarian stage of morality, if I can take an interest in others for their own sakes, I shall recognise as "good absolutely," and something absolutely to be promoted for them though not for me, what they find good. A pantomime to me is not even pleasant much less good, but I may regard it as "good absolutely" to take a child to a pantomime. On the contrary, I go to a lecture at the Royal Institution as a good for myself, but shall hesitate before taking a child with me.

Finally, then, I am willing to admit that "good" and "morally good" or "good conduct" do in a sense contain a common element. What is common to both is the permanent and authoritative satisfaction that they give. But the difference is profound. Sentiments arise in connexion with conduct—I use the term in the widest sense—such as the feeling of

goodness or badness in other objects never give rise to. I have always thought there was much to be said for a little-noticed suggestion of John Grote, that Ethical writers fell into confusion because, without knowing it, they dealt with two utterly different subjects—subjects which he proposed to name *Arctaias* and *Eudæmonics*. The distinction at least gives us food for thought, even if we decide that in principle any absolute division of our life into an Active and Passive part is inadvisable. The thought that prompted the distinction is the same that made Adam Smith distinguish sympathy with another's actions and emotions from sympathy in its current sense, the sympathy that shares another's pleasures and pains. It may well be that the former kind of sympathy is a vital element in Morality, while the latter is a slight and insignificant element. The preachers are not wrong in saying that not merely courage and ingenuity have value because they encounter evils and remove difficulties, but that conversely evils and difficulties have their value because they supply a field for courage and ingenuity. There is a self-approval or approval of others when evils are faced, a remorse or condemnation when they are shunned, which appear to me not merely not to be measured by the material advantage of such courage, but to be of a radically different kind from any feeling that the contemplation of such advantages can evoke. It is the fashion nowadays to decry asceticism except so far as it strictly merits its name as a training for meeting life's unavoidable difficulties. But even needless asceticism has a charm of its own. I think it needless to enlarge on this topic. I will only say generally that though it may seem to controvert Logic—for which perhaps we should feel less respect if we reflected how much it is the slave or the shadow of human language—we shall be nearer the truth if we regard "moral goodness" as *sui generis*, than if we regard it as a species, albeit the most important, of the vast and motley genus of "the Good."

THE AIMS AND ACHIEVEMENTS OF SCIENTIFIC METHOD.

By T. PERCY NUNN.

I.

RECENT psychology, recent logic, and recent speculation are at one in laying stress upon the solidarity between man's "theoretical" and "practical" activities. Without the implication of acceptance or rejection of the metaphysical contentions of "Pragmatism" we may usefully fall in with the prevailing fashion in Thought so far as to replace the current static conception of Science as a body of truths by a dynamic conception of it as a definite pursuit. Such a conception of it is adopted in this paper. Science is here conceived as a definite secular conative process which may be distinguished in and traced through the conscious life of civilisation. Only when a scientific "result" is thus considered in connexion with the whole conscious process of which it is the "end" can we hope (as Mach taught us long ago) to submit it to profitable criticism. Since some such criticism is aimed at in this paper, it follows that either an attempt must be made to characterise that process or some current characterisation must be adopted as satisfactory. As I do not know one which I can accept as altogether suitable for my purpose, the former alternative must be embraced.

The statement that the conative process with which Science is identified reaches its end only in the enunciation of judgments of a certain class will probably be received without demur. Nor, if I say that these judgments refer to the Objective in experience will it be complained that I am ungenerously narrowing their field. The whole "furniture of earth and choir of heaven," "the starry heavens without and

the moral law within" are but items in the inventory of the Objective. At the same time, although the Objective is here conceived as containing much more than "physical nature," it has its limits, and does not include everything that (in Mr. Bradley's phrase) can be set over against the self, and so become an "object" of attention; not everything that (because it can be thought of) is maintained by Mr. Moore and Mr. Russell to have Being. A round square and Colonel Newcome are examples of objects of thought which are to be excluded from the Objective. We can, it would seem, characterise them by saying that these objects lack a certain priority to and independence of our thinking which is the necessary mark and guarantee of undoubted items of the Objective. It may be difficult to refute the argument that Colonel Newcome must have had being before 1854 or Thackeray could not have thought of him, but it will hardly be maintained that Thackeray discovered him "in just the same sense in which Columbus discovered the West Indies." At most it could be claimed (presumably) that "the elements so mixed in him" subsisted before Thackeray, by *selecting* them, brought them into a special relation in which they were not related prior to the act, and so "created" the Colonel.

The same distinction might have been indicated by saying that the Objective contains everything that must be "reckoned with," everything that must be considered as a *datum* for human action. From this point of view it is clear that, although Colonel Newcome forms no part of the Objective, Thackeray's conception of him does, being a thing that has influenced human action on a comparatively large scale, and being precisely the conception it was and no other in virtue of its particular content, which must be distinguished from its object. Similarly, the Objectivity of my *thought* of a round square is demonstrated if it moves me to mirth or becomes so irresistibly attractive as to make me a "case" for the alienist.

But I am not disposed—at least without a struggle—to accept the position that this relevance to action is the essence of the Objective, and not merely a property of it coordinate with others. My whole paper is in a sense a contribution to the discussion of this burning question, so that I will make here only one suggestion—a suggestion that has probably occurred to many. If to be Objective means to have a relevance to purpose and action, how is it that we recognise material things and thoughts as having that relevance before the course of events has revealed it? Why do I ascribe Objectivity to the hundred thalers on the table, and deny it to the content of my thought of a hundred thalers before I have attempted to spend or even to touch them? The reply that it is because the former are like in all respects to thalers which *have* been things “to reckon with”—or upon, while the latter are not, is plausible in this special case, but does not seem sufficient to meet the general case of the recognition of Objective existents before experience of their relevance to action. Surely, we may retort, the perception of this similarity which is the signal of subsequent relevance to action is the direct and simple perception of the presence of Objectivity as such—a property which as a matter of fact is accompanied by the property of relevance to action.

In a somewhat similar way we may meet the contention that the Objective is that which is “the same for all.” Upon this view the “finite centres” in which all experience occurs, find it at once possible, and necessary for the development of intercourse with other centres, to “pool” a large part of their experience, and this common matter becomes the objective world, exterior to all and the same for all. Some writers (*e.g.*, M. Poincaré) attribute a very great importance in this connexion to language, which they seem to regard as actually the means by which a “same for all” comes to exist, and not merely the means of our becoming aware that it does exist.

Here we may repeat our objection that the Objective is known directly as such prior to the discovery that it is the same for all. We may add in this case the further objection that in the inventory of the Objective we include not only unique experiences in the world of physical existents—such as astronomical observations incapable of repetition—but also the whole world of psychical existents, whose very nature it is to appear in the “panorama” surrounding a single centre only. Not a single feature of such facts can be excluded from the operations of Science, yet how can they be regarded as “the same for all”? Only, I submit, by a kind of extrapolation from that part of the Objective—“physical reality”—which, as a matter of fact is the same for all. We must say, that is, of such experiences, not that being the same for all they become Objective, but that being Objective (*simpliciter*) they are regarded as the same for all, and therefore, part of the proper subject matter of Science. Being experiences whose content announces itself as independent of the self of the moment over against which they are set, they may be thought of as occurring with an identical character in *any* centre. They become, that is, objects whose features, like those of “material objects” are capable of exact determination without reference to their presentation at all—although, of course, their position as a class of existents is fixed by their peculiar relation to the “finite centre” in which they occur.

The actual contents of the Objective must be reviewed very briefly. “Everyone except a philosopher,” says Mr. Russell,* “can see the difference between a post and my idea of a post.” I ignore this uncomplimentary reservation and assume that we are all prepared to admit not only that they are existents of different orders, but also that both have (like all existents) the character of Objectivity—the post, because it would be the particular thing which it is, even if I did not happen to see it;

* Russell, *Principles of Mathematics*, i, p. 451.

the idea because it would be an idea with just that particular content, even if I did not happen to perceive that I had "had" it. Difficulty only arises in the absence of the plain guarantee of "priority" which the perception of existence itself gives. In this case, to quote Mr. Russell again, "there exists everywhere the greatest confusion"—confusion that can only be removed by the frank recognition of another type of Objectivity which we may call *Objective subsistence*. If we think of the number 100, or of π , or of the tangent to an ellipse it must be recognised that the object of our thought has a priority to our thinking, that entitles it to be called Objective in the same sense as existents must be called Objective. Such objects of thought present themselves as features of experience which must be "reckoned with," and are not subject to our caprice. They may not be obvious to untrained inspection any more than the finer details of a microscopic section are, but when once envisaged by the competent mental eye they are observed to *have* their peculiar features as a matter of fact, quite apart from the observation. In Mr. Russell's forcible phrase such "subsistents" must be "discovered in just the same sense in which Columbus discovered the West Indies":—they are *Objective* subsistents.

The Objective, of course, contains—and Science accepts at the outset of its task—a great deal more than the very general distinctions that have just been made. Lack of time forbids me to attempt more than to indicate its further contents roughly by saying that they constitute the "plain man's" view of the world. My omission to deal with them more fully is more than compensated by the fact that I am able to refer you to Professor Stout's convincing paper on "Primary and Secondary Qualities" read before this Society in 1903, with the results of which I cordially agree. The main point of Professor Stout's paper is his rehabilitation of the secondary qualities as equally objective with the primary qualities of things. The explanation of the prevailing confusion upon the

subject is without doubt that subsequent criticism has tampered here so constantly and for so long a time with the unsophisticated deliverances of the "plain man's" consciousness that it is not easy to ascertain precisely what those deliverances are.

To take one or two simple instances. The thing which is bright at noon, becomes grey at nightfall. Two materials whose colours "match" in sunlight, in candlelight are obviously discordant. To credit these changes in colour to the things themselves is not (I submit) the consequence of "a natural fallacy of ordinary thinking," but only appears in that character in the light of special *scientific* attempts to "explain" the phenomena. But such explanations simply show that these objective facts are in necessary relation to other occurrences which may be conceived in terms of primary qualities only. This relation does not destroy the Objectivity of the phenomena in question any more than the demonstration of a necessary relation between psychoses and brain changes destroys the Objectivity of the former.

Without further argument, then, I assume the truth of what I take to be the view enunciated by Professor Stout, and reaffirmed recently before us by Mr. Moore, that secondary qualities have as indefeasible a claim as primary qualities to the Objectivity which I hold that the "plain man" ascribes to them.

Another characteristic of the Objective is so important that it would demand my detailed attention if I were not able as in the former case to subscribe assent to the conclusions of incomparably more competent students than myself. I refer particularly to the admirable chapters in the *Principles of Mathematics*, in which Mr. Russell has restated and completed the results of many thinkers on the subject of *series*. The constituents of all the three orders of the Objective which we have recognised, may be considered as forming series in respect of many of their various characters. Among these the series which we know as the numerical series is of prime importance.

for through correlation of its members with terms of other series distinguishable in the Objective, our race has advanced to that persistent and complicated *measuring*, which is the most salient feature of scientific activity.

II.

In attempting to exhibit the main outline of the Objective as it appears to the "plain man" before the advent of scientific interpretations, one runs the risk of an accusation of merely adding to the inhabitants of the shadowy land, where the "economic man" and the "natural man" who enters into "social contracts" already dwell. At the least one may be met by the objection that many or all of the plain man's "views" are, after all, interpretations—interpretations which themselves at one time represented the high water mark of "scientific" investigation. The objection undoubtedly has force and we must return to it later, but the accusation may be evaded by the admission that the plain man as such *is* a fiction in so far as he is an abstraction from within the wider self of each of us. Much as the total outlook of mankind upon the world varies from China to Peru, there seems to be a solid core of agreement everywhere which alone truly answers to the description which we have given of the Objective. The scientific traveller on a high plateau of the Andes and his native guides view in different ways the impossibility of getting their potatoes to cook.* To the latter the impossibility is due to the simple fact that "the cursed pot," doubtless owing to the devil in it, "did not wish to cook potatoes"; to the former it is an interesting example of the dependence of the boiling point upon the pressure. But although the whole "situation" may be very different in the two cases, there is yet a common basis of inevitable *fact* upon

* Darwin, *The Voyage of the "Beagle"*

which the scientist and the native (if he is intelligent enough) can see that their "animistic" or "scientific" *interpretations* are simply embroideries. If (remembering at this point that there exists a science of psychology) we say that the "things" before our travellers—the fire, the pot, the lukewarm yet boiling water, the unsoftened potatoes—are all of them "constructs," we must admit at the same time that they are *inevitable* or *primary syntheses* which mankind everywhere would make from the same sensational data, while the whole situation as it exists for the two men is a *secondary synthesis* which, when one's attention is called to the matter, is seen *not* to be inevitable. Wherever the "objects" of attention dealt with in the former section must be held to have a synthetic character, only these primary syntheses were intended. Adopting this distinction we may say that the scientific process is one out of several possible alternative processes by means of which primary facts may be submitted to further construction, and it will be recognised as true that the object of this secondary synthesis is to make the primary facts *intelligible*. But this characteristic, though of fundamental importance, does not suffice to distinguish the scientific from all the alternative processes contemplated. To assert that a thing is intelligible or that it has meaning is to imply that it forms an element in a *system* of terms in relation. Thus a word—for example the word "button"—standing alone has meaning chiefly in so far as it is recognised as belonging to the English vocabulary within which it may be either a verb or a noun. When I say, "Pray you, undo this button," the fact that the word is now brought into relation with other words in a definite system gives it a fuller but still incomplete meaning: I may mean a coat button or a door button. The doubt can be resolved only by the context, that is, by the position of the sentence in a still wider synthesis. In this way the request, "Pray you, undo this button," may have all manner of meanings from the trivial one which a common

domestic context would give it, to the profound and pathetic significance it has on the dying lips of King Lear.*

The point in question could be illustrated indefinitely, but it seems necessary to note only that in every case the "system" in which an element finds its meaning must ultimately be an apperceptive system. This term, although it appears to have lost its former vogue in psychology, is, perhaps, yet the best available to suggest the integral, the vital connection of such systems with the past experience and present interests of an individual consciousness—the connection which is part of what I have already sought to suggest by speaking of Science as a conative process. No treatment, in fact, which isolates the efforts that have generated Science from their psychological *milieu* can hope to do justice to its subject, the true nature of which can only be brought out by placing the scientific process in its proper position in a Natural History of processes which all aim at rendering the Objective intelligible. Only by following such a method is it possible to reach a clear understanding of the relations to one another of the various elements which a cross section of contemporary scientific thought would exhibit.

• Among the interpretations of the Objective which demand comparison with the scientific, the most important from the point of view of distribution is "animism," the system of beliefs upon which are based those practices of "magic" which not only are found to-day under curiously similar forms among all savage races, but also have preceded the existing modes of thought among all civilised peoples. Indeed, the researches of authors like Professor Frazer† have revealed these ancient ideas still persisting widely beneath the modern intellectual surface, and have even seemed to justify a fear lest the depths should some day be upturned and the results

* Act v, scene iii.

† J. G. Frazer, *The Golden Bough*, 2nd ed., i, p. 74.

of centuries of man's toils and genius be overwhelmed. Moreover, they have shown that magic, so far from being an unorganised collection of bizarre superstitions, has every claim to the title of a logical intellectual system based upon fundamental principles, to repudiate which would be at the same time to repudiate science.* At the base of the whole structure we find the "scientific" Principle of Uniformity, which differs from the fundamental principle of Logic, that "of the same the same is always true,"† only by the addition of what we may, perhaps, call an "existence postulate" that "the same" for the purpose of predication actually occurs. As Dr. Frazer points out,‡ the principle takes the special form of arguments based either upon Similarity or upon Contiguity. Thus to secure the destruction of a distant foe, you procure a waxen effigy of him, and submit it to slow-roasting or to other ill-treatment, in the confident expectation that the unfortunate original will suffer analogous torments. Your hope springs, of course, from the belief that the two cases have a "core of identity" sufficient to make the "substitution of similars" effective. Again, if you have succeeded in wounding your adversary, and seek to complete your work by recovering the spearhead and allowing it to rust away, in order that he may simultaneously languish and die, you are assuming this time that the intimate association between weapon and wound has set up so much identity between two situations that their future developments must to a large extent be the same.

It seems highly probable that beliefs of this character arose as interpretations of observed facts, and it is most unlikely that they have survived through ages without the support of facts which have been taken to be verifications of them: there must, at least, have been a widespread belief

* *Op. cit.*, i, pp. 61, 62.

† Cf. Bradley, *Principles of Logic*, p. 133.

‡ *Op. cit.*, i, Ch. II, esp. pp. 10-18 and 56 *et seq.*

that they "worked." *Formally*, then, the processes are unexceptionable, and differ from a modern investigation apparently only in the *material* circumstance that now-a-days we should not fix upon these particular "cores of identity" in the situations contemplated as having any relevance to the similarity between the courses of their subsequent development alleged to be observed. Since, however, mistaken beliefs as to the significance of certain elements of phenomena have been common in the history of Science, if we are to find an *essential* difference between Science and Magic we must look elsewhere.

We can find the *differentia* we are seeking only by considering the whole primitive attitude towards the Objective, the system of beliefs and interests by which new phenomena were "apperceived." The primitive thinker had not reached the clear distinctions we make between the dead world and our living and conscious selves, and peopled the physical environment with active individual principles whose wills had constantly to be reckoned with. Moreover, his attitude towards this environment was determined to a predominant extent by considerations that touched the immediate safety and wellbeing of himself and of his tribe. To a very large extent it was the attitude of a being who combined with the passions and vices of a man the terror of the child in the presence of the unknown. Bearing these two facts in mind, the failure to distinguish between the animate and the inanimate which made him regard the environment as a great community of beings, for the most part to be dreaded or placated, and the constant pressure of the needs of defence and preservation, which made it necessary that *something should be done*, we can understand his at first sight capricious logic, and can see the psychological force of the considerations which led ultimately to his submission to the burden of a rigid system of beliefs and customary acts "heavy as frost and deep almost as life."

It was such a system of interpretations of the Objective which was losing its authority at the momentous epoch which we mark as that of the birth of Greek Philosophy. Philosophy, the child of Wonder, began when advancing knowledge was banishing the nymph and dryad from the world of practical activity to the fantasy world of the poet, when no longer the Ionian could

"Have sight of Proteus rising from the sea ;
Or hear old Triton blow his wreathèd horn."

With the realisation of the inadequacy of the once sufficing explanations of the world's happenings, there arose the need for more satisfactory ones, while the widening and deepening of intellectual interests that came with an age of comparative personal and social security, brought men face to face with the old problems of change and decay in a much more general form. The motive of the movement, which we commonly date from the speculations of Thales, was to seek escape from the intellectual oppression of the world's ceaseless flux in some abiding reality. The animistic "moment" was passed, but men had not yet come to that realisation of the great gulf fixed between their real selves and physical nature which is the distinguishing mark of the modern consciousness.* We find accordingly that the new effort to render the Objective intelligible takes the form of an attempt "to give back to Nature the life of which it had been robbed by advancing knowledge . . . simply by making it possible for that life which had hitherto been supposed to reside in *each* thing, to be transferred to the one thing of which all others were passing forms."† Animism was replaced by *Hylozoism*.

Once more we have to distinguish the "secular comatose process" here initiated from Science. That the Greeks collected material indispensable to the structure of Science is not to be

* Martineau, *Types of Ethical Theory*, i, pp. 123, 124.

† Burnet, *Early Greek Philosophers*, p. 13.

disputed, whatever estimate we adopt of the actual value of their achievements on the whole and in detail. As a result of recent research that estimate has undoubtedly tended to rise.* We can no longer accuse them of an entire neglect of physical experiment, and the late Professor Huxley, after a careful consideration of the existing records, arrived at "a very favourable estimate of the oldest anatomical investigations among" them.† Burnet has, moreover, defended the hastiness with which hypotheses were advanced upon the warrant of a very slender bridge of facts, regarding this haste as naturally characteristic of early undisciplined enthusiasm, and retorting effectively that the same fault is by no means absent from the history of modern investigation.‡ Finally, Jowett has attributed to these "general notions" a positive value, regarding them as "necessary to the apprehension of particular facts . . . Before men can observe the world, they must be able to conceive it." §

Against these apologies it must be maintained that, with certain exceptions that hardly affect the argument, the "scientific" achievements of the Greek thinkers were simply incidental to the search for the "abiding reality" which is the predominant characteristic of the whole intellectual movement. This which was true of Milesian Nature-philosophy, was still more obviously true when their speculations gave place to the "moralised" conceptual investigations in Being and Becoming of Heraclitus and his Eleatic opponents. We must maintain the same of Empedocles, though he "anticipated" the theory of organic evolution, though his *ῥιζώματα* were the direct ancestors of the modern elements, and though his "mechanical" *Weltbildung*, in which, besides these *στοιχεῖα*, only the

* See Mach, *Science of Mechanics*, 2nd Eng. ed., App. I.

† On certain Errors attributed to Aristotle in *Science and Culture*, p. 193.

‡ Burnet, *op. cit.*, p. 26.

§ Introduction to the *Timæus*: *Dialogues*, iv, p. 416.

forces of Love and Hate play their part, may not so fancifully be compared with the object of physical science as conceived (for example) by Helmholtz.* To be brief, not even the elaborate systems of Democritus and Aristotle can be exempted from the general statement that we are dealing here with attempts to render the Objective intelligible which, on the ground of an essential difference in the whole "situation," must be distinguished from Science.† To justify this statement fully would obviously require so much time that I must ask to be forgiven for stating dogmatically a contention the principle of which you will, I hope, be inclined to admit without further argument.

For the same reason it is impossible to do more than illustrate the fact that my contention also holds good of many modern thinkers, who have yet made contributions to the fabric of Science of fundamental importance. In the case of these moderns the individual systems of ideas by which Objective facts were apperceived were dominated by theological as well as philosophical elements. Thus Descartes when, to complete his philosophical system, he turns his attention to the actual particulars of the behaviour of the *res extensa*, deduces (in an imperfect form) the modern doctrine of the Conservation of Momentum from considerations of the perfection of God!‡ A little later Leibniz corrects the deficiencies of this principle, pointing out that Descartes had neglected to observe that the direction as well as the quantity of "force" (momentum) is conserved. Our interest fastens on his further remark that if

* *Ueber die Erhaltung der Kraft*, Einleitung, p. 6: "Die Naturerscheinungen zurückzuführen auf [Materie und] unveränderliche, anziehende und abstossende Kräfte."

† Cf. Plato's view that "the movements of the stars are only bad diagrams illustrating the truths of ideal astronomy," or Aristotle's conception of laws valid only "*ἐν τῷ πολλῷ*," with Galileo's conviction that unbiased investigation of matter will explain all apparent anomalies in its behaviour. [*Dialogues*, Weston's trans., p. 3.]

‡ Descartes, *Principia Philosophiæ*, 2nd part, § 36.

Descartes had noticed the fact, "he would have fallen into my System of Pre-established Harmony."*

But for the illustrations most suitable to my purpose I must direct your attention to the writings of Keppler; for the student who picks his way discreetly through Frisch's monumental edition† of the *Omnia Opera* of that heroic astronomer, will gain as his reward a vivid idea of how profoundly the whole "situation" in which Objective facts are actually central is determined by the character of what I have already called the "embroidery"; and will, moreover, catch sight of the human spirit at the precise moment of one of its most interesting metamorphoses.

Keppler begins (in the *Mysterium Cosmographicum*, 1596) as an enthusiastic young convert to the heliocentric doctrine of Copernicus. He defends the new theory on the ground of its superior simplicity, not *hinc catenula*, its simplicity as a *description* of the facts, but its *real* and meritorious simplicity as an actual creative plan.

"Amat [Natura] simplicitatem : amat unitatem. Nunquam in ipsa quicquam otiosum aut superfluum extitit : at saepius una res multis ab illa destinatur effectibus."‡ One form of orbit, then, should be *expected* to suffice for all the planets, instead of the deplorably diverse orbits of the Ptolemaic system. In the spirit thus indicated he proceeds to determine the reasons why the solar system could not but be precisely as it is. First we learn why a combination of curves and linear distances (from the Sun) should be exhibited : "Quantitatem autem Deus ideo ante omnia existere voluit, ut esset curvi ad rectum comparatio."§ Moreover, these curves will lie upon spherical surfaces so as to exemplify the Trinity : "[Imago] Patris scilicet in centro, Filii in superficie, Spiritus in aequalitate $\sigma\chi\epsilon\sigma\tau\epsilon\omega\varsigma$ inter punctum et ambitum."||

* Leibniz, *Monadologie*, § 80 ; *Théodicée*, § 61.

† Keppler, *Omnia Opera*, ed. Frisch. Frankfurt, 1858 71.

‡ Cap. I, p. 113 (Vol. I. of Frisch's ed.).

§ Cap. II, p. 122.

|| *Ibid.*

Similarly there must have been the best of reasons for the choice of the particular dimensions of the orbits, the general principle being, "Nefas est . . . quicquam nisi pulcherrimum facere eum qui esset optimus."* So it was inevitable that the Creator should lay the foundations of the planetary worlds in accordance with the ideas He would gather from His contemplation of the Five Perfect Solid Figures. Imagine the sphere of which the circular orbit of Saturn is a central section, to be circumscribed about a cube, then the sphere which contains in a similar manner the orbit of Jupiter will be inscribed within this cube. Next, within the sphere of Jupiter let a regular tetrahedron be inscribed; this will in turn circumscribe the sphere of Mars. Thus we reach all the planets in turn, finding it obvious that Man—*finis et mundi et omnis creationis*—should have his habitation in the midst of the planetary host, three celestial bodies guarding his path without, three (including the Sun) within.†

So far you will agree, the course of Kepler's investigation has exemplified my remark that, *formally*, non-scientific attempts to render the Objective intelligible may not differ from those which are admittedly scientific. We have the usual primary Objective basis and the usual secondary construction—the Objective facts qualified by an "hypothesis." But the secondary construction here exhibited (you will object) is one that is capable of *verification*—*i.e.*, of predicting new Objective facts which contributed nothing to the determination of that construction. The relative distances of the planets from the sun in Kepler's system are open to calculation and comparison with data of observation. Kepler's theological prepossessions do not prevent him from recognising this truth in the clearest manner. "Transeamus modo," he says, "ad ἀποσηματα orbium astronomiæ et demonstrationes geometricas : quæ nisi consentiant, procul dubio omnem præcedentem operam

* Cap. II.

† Cap. IV, p. 123.

luserimus.”* So the relative radii of the spheres imprisoned in this complicated way between the regular solids are computed, and the results compared with the estimates of Copernicus. The concordance is practically perfect!†

In 1600 Keppler left his chair at Gratz, and received from Tycho Brahe that introduction to the Emperor Rudolph which led to consequences of the first importance in the development of Science. Brahe died in the same year, and the Imperial mathematician inherited his splendid collection of observations on the planet Mars. In 1609 appears the famous treatise, *De Motibus Stellae Martis*, in which he sets forth with the delightful long-windedness of a leisurely age the results of his patient study of these *data*. After the fashion of a day when philosophers reasoned even of Ethics *more geometrico*, Keppler prefixes to his work a collection of *Axiomata physica de motibus stellarum*. These are of the highest interest for they betray a complete change (since the *Mysterium Cosmographicum*) in the astronomer's attitude towards his facts. To determine the particulars of the orbits of the planets we are no longer invited to consider that they must move “ad maiorem Dei gloriam: motus a spatio dependet: planetae aguntur vi naturali; vis motrix opus habet propagatum a fonte ceu effluxu”: are among the startling “axioms” that meet us.

The body of the work is largely occupied by Keppler's famous demonstration that the orbit of Mars instead of being a circle, as the prepossession in favour of “perfection” had hitherto compelled him to suppose, is actually an ellipse of which the sun occupies one focus. It will interest us more to attend to the remarkable change in his whole attitude towards the objective upon which I have already remarked. We find the evidences of this change most prominent in the introduction and the later chapters of the treatise. *Ce n'est que le*

* Cap. XIII, p. 148.

† Table in Cap. XIV, p. 151.

premier pas qui coûte, and when Keppler has once been compelled to seek the secondary construction that is to make the primary facts intelligible in a disinterested study of those facts themselves in their quantitative determination, he travels fast towards a characteristically "modern" point of view. Since the planets no longer move in circles they must resign with these the crystal spheres in which since the days of Plato they have been "quiring to the young-eyed cherubim." These destroyed, what is to guide a planet's motion? The *anima mundi* remains, it is true, and Keppler, like his great contemporary Gilbert, finds nothing objectionable in the conception. He had, in fact, used the admitted existence of the *anima mundi* as an argument against the Ptolemaic orbits, inviting his readers to pity the condition of the distracted world-souls who in that complicated system "ad tam multa respicere jubentur ut planetam duobus permixtis motibus invehant!"* Similar considerations seem to deter Keppler from assigning to the *anima mundi* the perpetual solution of the mathematical difficulties incidental to following an elliptical path round an eccentric sun. He looks elsewhere for a means of, at least, lightening the world-soul's burden and finds what he wants *within the Objective itself* in a new conception of the sun as *fons motus*. This conception has not been reached without external suggestion, and when we meet the phrase *orbs circulis tractorio* we are left in no doubt as to the source of that suggestion. Keppler has been reading the newly-published treatise *De Magnete*, by Gilbert, of Colchester, the Father of Experimental Science, and has fastened upon the fruitful analogy between magnetic and stellar phenomena. The first result is a "true doctrine of gravity" which points directly to the completer doctrine of Newton. Repeating the argument given above in connexion with the *anima mundi* Keppler asserts the impossibility "ut forma lapidis movendo corpus suum

* *Introd.*, p. 149 (Vol. 3 of Frisch's ed.).

quaerat punctum mathematicum aut mundi medium.”* On the contrary, “gravitas est affectio corporea mutua inter cognata corpora ad unionem seu conjunctionem (*quo rerum ordine est facultas magnetica*) ut multo magis Terra trahat lapideum quam lapis petit Terram.”† There are, it is true, difficulties in the application of the analogy. The investigations of a Galileo were necessary before a Newton could see that the moon is actually and always falling towards the earth. For Keppler the difficulty is to account for their remaining apart: “Si Luna et Terra non retinerentur *vi animali aut alia aliqua arquipollenti* . . . Terra ascenderet ad Lunam . . . Luna descenderet ad Terram . . . ibique jungerentur.”‡

The words italicised in this passage illustrate at once Keppler's willingness to retain the conception of the *anima mundi* and his growing preference for a *facultas corporea* to a *facultas animalis* if the former can make the facts intelligible. We may leave the consideration of the development of his ideas at the point where he reaches a “secondary construction” of the facts of the stellar observations suggested altogether by such material analogies. In this conception the planetary movements are ascribed to a two-fold “virtue”—one of the planet and one of the sun. That of the planet is compared with the work of oars in rowing, that of the sun to the stream of the river. And so we reach the all-important conclusion, in which the soundness of this conception is based upon the solid experimental results of Gilbert: “Quale flumen, talis remus. Flumen est species immateriata virtutis in Sole magneticæ. Quin igitur et remus de magnete quippiam habeat? Quid si ergo corpora planetarum omnia sunt ingentes quidam rotundi magnetes? De Terra (uno ex planetis, Copernico) non est dubium. Probavit id Gulielmus Gilbertus.”§

* *Introd.*, p. 150.

† *Introd.*, p. 151.

‡ *Ibid.*

§ *Paras Quarta*, Cap. LVII, p. 387.

It will be noted that Keppler's final conception of the planetary system is *formally* less satisfactory than the earlier one—since it fails to suggest quantitative determinations by which it could be verified. At the same time it will, I hope, be agreed that when, at some moment between 1600 and 1609, Keppler, wrestling with Brahe's records, forgot his pious prepossessions in his anxiety to understand the behaviour of Mars *for the sake of understanding it*, he adopted for the first time an attitude which was genuinely "scientific." The *differentia* of Science, then, as a conative process whose aim is to render the Objective intelligible is the presence of no motive except the *desire* to render it intelligible—particularly in its quantitative determinations. No philosophical leanings, not even the desire of power over Nature for which Bacon was willing to be her minister can be admitted beyond the "margin" of the upper-ceptive area in which the Objective facts are central. The scientific attitude is essentially that of the *sarants* who, drinking to the next great discovery, coupled with their toast the hope that it might never be of any use to anybody.

I need hardly say that Keppler does not provide us with the first example on record of the scientific attitude. Mach holds that the beginnings of Science are to be found in the descriptive communications of the processes of the craft made by older members of a guild to beginners.* So Höfding,† with truth, says that "the appearance of a Leonardo or a Galileo‡ is only comprehensible when taken in connexion with Italian industry." But industrial pursuits, I suggest, can never do more than supply the *experience* which forms the starting point for the scientific process which follows only from

* Mach, *Science of Mechanics*, p. 4.

† Höfding, *Hist. of Modern Philosophy*, i, p. 161.

‡ Cf. the opening words of Galileo's own Dialogues: "The constant employments in your famous arsenal of Venice, and especially those relating to what we call Mechanics, seem to me to afford, to a speculative genius, a large field to philosophise in." (Tr. Weston.)

a specific attitude towards that experience which I have tried already to characterise. Just as J. A. Symonds has shown us that in the epoch of the Crusades and dominant Scholasticism the Latin songs of the Wandering Students "gave clear and artistic utterance" to a "bold, fresh, natural, and pagan view of human life"; so, doubtless, ever and anon men of intellect turned aside from the theologico-philosophical studies of their day to the task of rendering intelligible objective facts in which they took an immediate interest and delight. Such a one, in part, was Roger Bacon, such a one was his master, Peter of Maricourt,* such a one pre-eminently was Leonardo da Vinci who, though his discoveries do not appear actually to have affected the course of Science, left among his remarkable manuscripts a presentment of the scientific attitude which can hardly be improved. I conclude this section by quoting a typical expression of his opinion:† "In dealing with a scientific problem I first arrange several experiments, since my purpose is to determine the problem in accordance with experience and then to show why the bodies are compelled so to act. That is the method which must be followed in all researches upon the phenomena of Nature. It is true that Nature as it were begins with reasoning and ends with experience, but nevertheless, *we* must begin with experience, and by means of it strive after the discovery of Truth."

"The interpreter of the wonders of Nature is experience. . . . We must consult experience in the variety of cases and circumstances until we can draw from them a general rule that is contained in them. And for what purpose are these rules good? They lead us to further investigations of Nature

* To whom Gilbert of Colchester was much indebted. See in Bridges' edition of Bacon's *Opus Majus*, 1897-1900.

† From Grothe, *Leonardo da Vinci also Ingenieur und Philosoph*, Berlin, 1874, p. 22. Cf. the following passage: "Le me pare che quelle scienze sieno vane e piene di errori, le quali non sono nati dall'esperienza, madre di ogni certezza, e chi non terminano in nota esperienza." *Frammenti letterari e filosofici*, p. 94.

and to creations of art. They prevent us from deceiving ourselves or others by promising results to ourselves which are not to be obtained."

III.

A "natural history" of the more sustained attempts that humanity has made to render the Objective intelligible—that is to give it a place in a definite apperceptive system—would lead us, then, to the conclusion that its *differentia* is not, as has been frequently supposed, a peculiar method, but simply and solely a definite attitude of the "Self of the moment" towards the Objective, a definite character of the system by which new elements are "apperceived," a character only to be expressed by saying that this system is dominated by a permanent interest in the particulars of the Objective as such. The next chapter in our natural history would examine in turn the various special attempts to make the Objective intelligible which are included in the genus "scientific." Such an examination would, I submit, bring out the fact that it is difficult to declare any concept essentially incapable of mediating a scientific interpretation of the Objective to some thinker. Thus it has already been pointed out that Keppler in his "scientific" period did not shrink from continuing to utilise the conception of the *anima mundi*. A less violent but essentially similar example is the use of the concept of *cause* in the sense of transeunt action—a notion with which some scientific thinkers have entirely dispensed, while to others it is of cardinal importance. Facts of the same order are the marked preference of Weber and his Continental school for the concept of action at a distance and the equally marked preference of the British school for the concept of an intervening medium as a means of rendering action at a distance intelligible. Especially illuminating in this connexion are the well-known facts that Maxwell based his immensely important electro-magnetic theory upon the concept of a "displacement" to which it is

impossible to assign a definite meaning,* while Lord Kelvin, speaking on the same subject said, "As long as I cannot make a mechanical model all the way through, I cannot understand, and that is why I cannot get the electro-magnetic theory of light."† An almost better illustration is afforded by Mr. McDougall, who not only conceives his "neurin" as a fluid, but defends his practice in an excellent note‡ by arguments essentially the same as those I am advancing. Finally, it is clear, that this doctrine of the relation of the scientific concept to the primary facts does not exclude the concept of "end" from the investigator's armoury of interpretative weapons and so admits the methodological propriety of the practice of "neo-vitalists" such as Bunge and Rindfleisch. Our doctrine, moreover, has a normative value. It declares that a concept which is to render given primary facts intelligible must be formed as a reaction upon the stimulus of the presentation of those facts in their actual determinations. While it admits, then, the aid of any concept borrowed from any other context it refuses to allow objective facts to be annexed simply in order to widen the territories of an aggressive theory, and still less to permit their *prima facie* deliverances to be ignored through a bias in favour of any particular type of interpretation. Thus "electricity" and "neurin" may both be legitimately conceived as fluids, but the physicist is not to rule the concept of "interaction" or of a "soul"§ out of court, and still less is he to refuse to entertain evidence in favour of "telepathy."||

The only restriction upon the secondary construction is that its form shall be determined by the actual particulars of the primary facts. This condition limits the usefulness of such a

* See Merz, *Op. cit.*, ii, 93.

† Quoted by Ward, *Naturalism and Agnosticism*, i, p. 119.

‡ McDougall, "The Physiological Factors of the Attention Process," *Mind*, N.S., No. 43, p. 350.

§ Cf. James, *Pr. of Psych.*, i, p. 137; McDougall, *Physiological Psychology*, pp. 8 et seq., p. 78.

|| As at least one very distinguished scientist is reported to have done.

conception as the *anima mundi* or the "end" to a phase in the development of knowledge of the facts when the particulars are not capable of full determination.* At such a time such a concept as Vitalism may legitimately be used "as a comfortable halting place where the reason may be laid to rest on a pillow of obscure ideas" when there is "danger of premature and, therefore, inadequate physico-chemical explanations of the phenomena of life."†

I am aware that in view of the vigorous and important attack upon "hypotheses" made by writers of such eminence as Ostwald‡ my defence of them will appear reactionary. I venture to think, however, that Ostwald fails to distinguish between the *real* value and the *psychological* value of hypotheses. Hypotheses, such as Maxwell's displacement, the weight of a molecule, electrons, the carbon-tetrahedron, entropy, heat itself, may not be *verifiable* and, therefore, have no real value, but their psychological value as "leading us to further investigations of Nature" and prompting to fresh determinations of the Objective may be immense. Ostwald's assertion that scientific advance has taken place in spite of, and not by means of, hypothesis§ is, at best, a half truth. It is true that hypotheses have temporarily delayed the progress of Science in some particular field, but when they have disappeared they have generally been devoured by their own children—objective determinations to which they led. To maintain that these determinations would have been made without the hypotheses—for example that Maxwell, without the concept of electro-magnetic displacements in the field around a varying current would have thought of locating at points in the field the disembodied relations expressed by his differential equations, the manipula-

* Cf. for "end," Boyce Gibson, *Philosophical Introduction to Ethics*. p. 53.

† Prof. Hering, quoted by McDougall, *loc. cit.*

‡ Ostwald, *Vorlesungen über Naturphilosophie*, X, esp. pp. 211-215.

§ Ostwald, *op. cit.*, p. 225.

tion of which led Hertz to discoveries of the highest importance, seems itself to be an indulgence in hypothesis of a thoroughly unwarrantable character. The point of Ostwald's objection to a hypothesis—a *Bild** used to make the phenomena intelligible—is that the *Bild* will invariably contain elements which are not present in the original observations. There are two answers to this objection. In the first place it may be urged that this property of the hypothesis is that which above all makes it valuable. The portion of the Objective under investigation must be the seat of other relations than those "appereived" by the conception, and it is already probable that the original analogy will extend to the other properties of the concept whose correspondence with properties of the Objective under examination has not yet been established. Thus "a descriptive theory of this kind does more than serve as a vehicle for the clear expression of well-known results, it often renders important services by suggesting the possibility of the existence of new phenomena."[†]

In the second place, physicists are so sensible of the aid they receive from such a descriptive hypothesis, that they do not discard it even when it is recognised as containing elements actually inconsistent with known Objective determinations. The conception of the ether as a frictionless fluid passing among the molecules of matter "more freely than the wind through a grove of trees," has been none the less useful because incompatible with the rigidity which the facts also seem to demand. Ultimately, of course, such incompatibility will not be tolerated, but its very presence sets a further problem—the replacement of the inconsistent hypotheses, both having reference to the

* "Dass . . . man durch die Benutzung des Bildes in die Darstellung der Erscheinung Bestandtheile hineinbringt, die dem Bilde angehören, nicht aber der Erscheinung selbst," *op. cit.*, p. 212.

† Prof. J. J. Thomson, introducing his conception of the "Faraday tube" as an alternative to Maxwell's "displacement." *Recent Researches in Electricity and Magnetism*, 1893, p. 1.

same province of Objective fact by another which shall do justice at once to all its elements. Such a complete correspondence between the elements of the descriptive hypotheses and of the province of the Objective is, of course, the ideal of the scientific process to which the successive concepts by which it is sought to render the facts intelligible approach, as Mach says "asymptotically."* Were it attained the "picture" and the "object" would coincide† and we should have "a complete systematised representation," "a complete synoptic [*übersichtliches*] inventory of the facts of the province" of the Objective free from the extraneous elements that hypothesis admittedly introduces.‡ When this consummation has been reached in any department of Science, descriptive hypotheses will still have a psychological value for the purposes of exposition and assimilation. Meanwhile they will continue to play an indispensable part in the conquest of the Objective whether in definite form as Lord Kelvin's "mechanical model all through," or a vague form like Maxwell's "displacement," being, as it were, *points de repère* without which great systems of reasoning cannot be built, just as transient ones require the aid of shadowy visual, auditory or kinæsthetic images.

Finally it may be pointed out that it is of small consequence to the progress of the special sciences whether the investigator attaches real value to his hypothesis, or whether he recognises that it is merely psychological. Lord Kelvin and Principal Rücker are quoted by Dr. Ward§ as examples of the former class, holding that in the ether and in atoms and molecules we have realities behind the veil of phenomena. while Maxwell in his attitude towards his earlier model of the

* Mach, *Principien der Wärmelehre*, 1900, p. 461

† "Wenn Bild und Gegenstand in allen Stücken übereinstimmen, so wären sie eben dasselbe, d. h. man kann eine Erscheinung vollkommen nur durch sich selbst abbilden." Ostwald, *op. cit.*, p. 212.

‡ Mach, *loc. cit.*

§ Ward, *op. cit.*, i, pp. 113 and 306.

ether,* Wollaston, Davy, Liebig and Faraday in their attitude towards Dalton's atoms, are given by Dr. Merz† as examples of the second. It seems probable that in the case of the latter class of investigators their attitude towards their conception is rhythmic, at one time yielding to a temporary belief in them, at another time criticising them as from an external point of view.

Whenever in the foregoing allusion has been made to the fully determined particulars of a province of the Objective, it is highly probable that my hearers will have assumed that quantitative or at least numerical determinations were intended. It is a commonplace that Science only moves with security where she can measure. Quite recently we have seen this truth demonstrated anew in the field of Biology, where Professor Karl Pearson‡ has so brilliantly illustrated old Roger Bacon's dictum that Mathematics is the "gateway and key to *all* other Sciences"; while, doubtless, even before Egyptian priests began to survey the lands left dry after the inundations of the Nile, men felt the application of number and measure to the spatial world to be natural and obvious.

But as Mr. Russell has shown, if A is 12 inches and B 24 inches from O, there is really an element of convention in the familiar assertion that B's distance from O is twice as great as A's.§ Those distances are definite relations which cannot strictly be identified with the relation of one number to another. The fuller truth is that it is possible, since the numbers form a "continuous series," to correlate every position on the straight line O B with a single number, while there is a

* "I do not bring it forward as a mode of connection existing in nature. . . . It is, however, a mode of connection which is mechanically conceivable and easily investigated . . . so that I venture to say that any one who understands the provisional and temporary character of this hypothesis, will find himself rather helped than hindered by it in his search after the true interpretation of the phenomena." *Collected Papers*, i, p. 486; quoted by Merz, *op. cit.*, ii, p. 83.

† Merz, *op. cit.*, i, p. 418.

‡ Pearson, *The Grammar of Science*, 2nd ed., and elsewhere.

§ *Op. cit.*, p. 180.

practical convenience in arranging the "one-one correlation" in such a way that if the distance (*i.e.*, the spatial relation itself before the advent of measurement) between O and A is equal to that between A and B, the difference between the numbers assigned to O and B is twice the difference between those assigned to A and O.

By the simple device of measuring with the foot rule, we are able to overcome the difficulty that different perceived distances between A and B have yet the same "representative value,"* that is, refer to the same real distance. Much the same holds good of such conceptions as temperature and weight. The same body at the same time may be pronounced by two different persons to be hot and cold, a result which is taken to mean not that the thing is both hot and cold, but that the felt hotness and coldness are simply different representatives of the same objective value. If a thermometer is placed in contact with the body it is taken for granted that the different positions of the surface of the mercury are each correlated with one objective condition of the body. Thus if the thermometer gives the same reading in the wind as it does behind a screen, then the air, although it feels colder in the open, must really be in the same objective condition, have, as Boyle vividly expresses it, the same *temper*, in both places.† If now we "graduate" the stem of the thermometer upon the foot-rule method, we shall have a series of numbers correlated with the various "tempers" or temperatures of the body. In this case the statement that one difference of temperature is double another has obviously still more of the conventional character than we noted in the case of distances,‡ for we have no

* Stout, *Proc. Arist. Soc.*, 1903, *loc. cit.*

† This problem is discussed by Boyle in his *Experimental History of Cold*, 1665, First Discourse; also p. 513. The conclusion may be claimed as a proof of our contention that hotness and coldness are objective qualities of things.

‡ Kelvin's "absolute thermometric scale" seeks to avoid this conventionality, but is too technical for discussion here.

method of deciding that the difference between temperatures A and B is equal to the difference in the case of B and C comparable with the use of the foot-rule in spatial measurement or of the pendulum in time determination.

When a hot body is placed near colder ones it gets colder, they get hotter. These primary facts become intelligible—are systematised—by the thought of a transference of “something” from the one to the other. This something is *heat*. Black,* who made such important conquests for Science by means of this concept, was one of those who are able to keep on their guard against the dangers which Ostwald sees in the *Bild*. He declines to form any definite conception of the relation of the heat to the substance which occupies the same space, on the ground that no Objective facts are before him to justify his doing so. But if heat is regarded as a substance at all, the “amount” of it which reaches the cold bodies must be thought of as equal to that which left the hot body. The problem is set therefore of finding “something constant” at both ends, so to speak, of the transaction. If a steady flame is the “source of heat,” it is impossible not to suppose that the “quantity of heat” leaving the flame per minute is always the same. Let us place above the flame in succession different weights of water each for the same length of time. Examination of the results shows that the product of the weight of water by the rise of temperature is in each case the same. This constant product, then, may be identified with the “quantity of heat” of which we are in search.

This simple example will serve to illustrate the weighty remark, made so long ago as 1867 by Rankine,† that “one of the chief objects of mathematical physics is to ascertain, by the help of experiment and observation, what physical quantities are ‘conserved.’”

* Black, *Lectures on Chemistry*, 1803.

† Quoted by Merz, *op. cit.*, p. 140. See also Divers, in *B.A. Report*, 1902, p. 564.

The illustration also brings out the fact that the constancies established in such investigations are of an entirely conventional character and refer to nothing objectively "transferred." We *assumed* that the two temperature changes were different aspects of the same transaction, an assumption whose consequences are made psychologically available by throwing it into the form of a transfer of "heat." We correlated the various terms of the series of temperatures and weights which appear in this transaction with numbers. If our initial assumption was correct, it seems now that *some* manipulation of the *data*—here the weights and temperature changes—*must* yield an equality, the particular form of this manipulation depending upon the particular manner in which the number series has been correlated with the series of Objective states of the body. Our success in finding the desired manipulation implies that, in the language of Lotze,* the bodies *do* "take note" of one another's changes of condition, and that the *data* we have manipulated, that is the original *data* with which numbers were correlated, is the complete expression of that "notice." In short, it is the verification in a particular case of the postulate of the rationality of the world.

We have now reached, perhaps, a point from which we obtain a clearer view of the circumstances under which, in the history of Science, psychical events came to be excluded from the causal series. To suppose that they are legally banished under the terms of Hume's famous edict against investigations that do not "contain any experimental reasoning concerning matter of fact and existence," is a view that no one could hold "except to save a theory."† And if they suffer through the condemnation pronounced against inquiries that do not "contain any abstract reasoning concerning quantity or number" we see that this defect is not essential to their

* Lotze, *Metaphysics* (Eng. Trans.), i, § 45, p. 118.

† Bradley, *Appearance and Reality*, p. 324.

nature as events, for "series" prevail in the psychical as widely as in the physical world. The difficulty is reduced to the practical difficulty of establishing for the terms of these series (which, as I have pointed out in the first section, are regarded as being "the same for all") an unambiguous correlation with the terms of the equally Objective number series which happens, like much of the physical, to be not only the same for all, but also accessible to all. Were such a correlation established it would apparently be possible to determine whether certain psychical changes and physical changes are or are not complete expressions of the "notice" which soul takes of body or body of soul.

IV.

The pre-critical view that in certain concepts of Science we reach the realities which lie at the back of perceived phenomena, is one which will always have an attraction for the actual workers in Science. It implies, perhaps, a certain aloofness from practical life to resist conclusions supported by evidence upon which one would act with confidence even in affairs of the highest moment. From this point of view Huxley* pours ridicule upon those who would decline to accept the geologist's reading of the palaeontological record. If they were consistent, he argues, they would decline to draw the usual conclusions from the oyster shells outside the fishmonger's door, or the mutton bone in the dust-bin.

In the class of cases which Huxley adduces there are few who would reject his conclusions; there are few of us, again, who would be satisfied, as Professor Karl Pearson leads us to suppose that he would be,† to "describe and classify [our] immediate sense-impressions and [our] stored sense-impressions

* In his lecture "On the Method of Zadig," *Science and Culture*, p. 139.

† Pearson, *The Grammar of Science*, 1st ed., pp. 418 and 319.

by the aid of the theory of evolution," even "had the universe been created just as it is yesterday"; or with a theory of matter upon which the negative "ether-sinks" (to which nothing perceptual appears to correspond) "would long ago have passed out of the range of ether-squirts" (which correspond to perceptual matter), so that we need not concern ourselves about their fate. There are few, I repeat, who would not be troubled with "obstinate questionings" as to the *truth* as well as the "economy" of these conceptions. The scruples of such seem to imply the conviction—conscious or unconscious—that the business of Science is, as I have so often insisted, to render the Objective intelligible, and that the Objective thus systematised must ultimately be the whole Objective and nothing but the Objective.* No gap in either the spatial or the time series is to be tolerated, nor can we suffer any place in either of the series to be filled by the hypothetical masquerading as Objective.

But this principle, apparently so simple and so clear, discloses unsuspected difficulties of application when we try to determine by its aid the precise value and import of the concepts by means of which we seek to make accessible Objective phenomena intelligible. Many of these concepts assign positions in the spatial and temporal series to things which it is either essentially or else practically impossible to verify. "Attraction" is an example of the first class, "atoms" of the second. What is the actual standing of such entities? It cannot be denied that *some* of the evidence is forthcoming which, if completed, would establish their existence, and if this evidence actually produces conviction in men of the highest intellect supremely conversant with the facts, what more is to be said? The denudation which "the Razor of Occam" would produce would depend entirely upon the hand that wielded it. If it were applied by Lord Kelvin the ether, for example,

* See Sigwart, *Logic*, ii, § 61.

would be safe ; if by Professor Karl Pearson, its fate would be at least doubtful.* If it were handled by Professor J. J. Thomson, the "Faraday tubes" would disappear, while "ions" would, I imagine, remain. The truth seems to be that while cases of this kind were few and isolated, men's attitude towards them might be indeterminate—each case was judged upon its merits. But when with the advance of Science a whole compact system of concepts appeared claiming to represent what "goes on behind what we see and feel" over the whole surface of the Objective, it became inevitable that individuals should take up a definite general attitude towards them, only to be abandoned exceptionally : that is, that they should adopt a more or less explicit philosophy of Science. For those who accepted the claims of the new concepts, "atoms," "energy," "ether," and the like became metaphysical terms, the names of ultimate realities, or of an hierarchy of realities, of which what we have described as the Objective is only the appearance. As metaphysical entities it was inevitable that they should eventually claim to be able to account for the whole of experience. Thus was developed that "mechanical philosophy" which has recently suffered such a severe cross-examination by the author of *Naturalism and Agnosticism*.

Against this view many arguments have been brought. The one most relevant (from the standpoint here adopted) is that the concept of the "realities" which are to replace the sensible *data*, are themselves abstracted from those data. Thus Duhem† not only argues, in a spirit entirely consonant with the spirit of this paper, that water is *not* really the hydrogen and oxygen which disappear when it is formed, but also shows that the atomic hypothesis upon which it is possible to conceive the "elements" as still present in the "compounds" is derived historically from Newton's famous Query 23. In this passage

* *Grammar of Science*, 1st ed., p. 214.

† In his *Le Miste et la Combination chimique*, 1902, and in other writings.

Newton suggests the application of the ideas that he had gained from his study of planetary bodies to the analysis of the behaviour of the bodies manipulated in experiments. Similar observations occur in several of Mr. Merz' splendid chapters. More recently still it has been pointed out* that the most thorough-going quasi-metaphysical attempt to account for perceived physical events is vitiated by the same circle. The most striking feature of the electric theory of matter is that it exhibits the property of "mass" as the consequence of the motion of "electrons." But to reach this result properties of the electromagnetic field are appealed to, and these properties are defined by differential equations into which the notion of mass derived from the study of molar bodies itself enters.

Opposed to the thinkers who adopt the view of the value of scientific concepts which has just been repudiated, are those who have felt themselves forced to take up one of the various positions included under the name of the *descriptive* view of Science. Most of these positions have a relation to the wider philosophical position of Humanism,† which makes them particularly interesting at the present moment.

"The great Poincaré," says Professor James,‡ misses Humanism by a hair. He has demonstrated§ in a brilliant manner the conventional character of Science, and has laid special stress upon the manner in which one theory has succeeded another in the same physical field.|| He appears to accept what we may perhaps call the disintegrating results of mathematical physics, regarding perceived things and events as really due to the superposition of a great number of similar

* See a review of works on "Electrontheorie," by H. A. Wilson, in *Nature* for June 22, 1905.

† See James, "Humanism and Truth," *Mind*, N.S., No. 52, p. 462.

‡ James, *loc. cit.*

§ In the essays reprinted in *La Science et l'Hypothèse*, and the more recent *La Valeur de la Science*.

|| See, e.g., *La Science et l'Hypothèse*, Ch. X.

elementary phenomena.* Moreover, he removes from the Objective every element—such as the secondary qualities—which cannot be proved to be “the same for all” by the use of language. “Pas de discours, pas d’objectivité.”† If, then, perception gives us no reality and the hypotheses of Science are only conventions, what is there that remains? We find that while hypothesis may succeed hypothesis—as, for example, Maxwell’s electro-magnetic theory of light succeeded Fresnel’s undulatory theory—the differential equations remain the same, the expression of veritable relations between real terms which Nature hides from us eternally, though Fresnel may think of them as *movements* and Maxwell as *electric currents*.‡ It is through its knowledge of these Objective relations that Science has so much theoretical hold over the inscrutable reals, that it is able to predict the future; but that same knowledge has clearly a certain “intellectual” value quite apart from its value as a collection of *recettes pratiques*.

Even this amount of intellectual value seems to disappear in the view of Science advocated by M. Le Roy.§ For this writer the laws of Science, when they are not conventional definitions, are simply *recettes pratiques*, “not true but *efficacious*,” “not concerning our *knowledge* so much as our *actions*,” “rather enabling us to *capture* the order of Nature, than *revealing* it to us.”|| Moreover, these laws have reference to artificial facts—*faits scientifiques*—created by the scientist out of the *faits bruts* of perception.

M. Le Roy’s scientific fact seems to correspond to a large extent with our “secondary construction” by which the “primary fact” is apperceived. An “atom” and an “eclipse”

* *Op. cit.*, p. 187.

† *La Valeur de la Science*, p. 262.

‡ *La Science et l’Hypothèse*, p. 190.

§ See the discussion reported at length in the *Bulletin de la Société française de Philosophie*, Mai, 1901. Le Roy’s views are criticised by Poincaré in the essay reprinted in *La Valeur de la Science*, Ch. X.

|| *Bulletin*, p. 5.

are examples given. Poincaré adds an "electric current" as the scientific fact constructed from the brute fact of a galvanometer deflection: also the "corrected reading" obtained by treatment of a number of direct readings. We may add ourselves the "rigid bar" by which the actual elastic lever is replaced in theory. But there is this important difference between Le Roy's conception and our own: the laws of science as conceived by him seem hardly to touch the brute facts, which, not being scientific, are outside Science.* This is why the law is in so many cases merely a rule of action. In our view, on the other hand, the whole object of the secondary construction is to render the primary facts intelligible, to bring out real relations between the brute facts which constitute the scientific fact, and to lead to the discovery of new brute facts related to those already recognised within the system.

The same kind of inversion of the relations of primary fact and scientific construction is shown by the illustrations given of the *dictum* that laws are frequently definitions. Such a one is the law that "phosphorus melts at 44° ," which is asserted by M. Le Roy to be merely a definition of phosphorus. One feels here in a peculiarly tantalising form the want of security of the relations between ideas and the reality beyond which some of us find in other presentments of Pragmatism. The definition "works," substances melting at 44° are actually encountered, but one has about their identity much the same kind of doubt as pursued the school-boy who feared that Shakespeare's plays were not written by Shakespeare but by another man of the same name.

Mach's splendid labours in this field are too well-known to need characterisation. For the founder and chief apostle of the new doctrine the concepts of Science are, as with us, means to an end, an end which is conceived as "the economic exposition

* Poincaré, *La Valeur de la Science*, p. 221. Cf. *Bulletin*, p. 21, where M. Le Roy says, "C'est ce qu'on ajoute au fait brut pour constituer le fait scientifique qui est le plus important."

of actual facts.”* It is clear that this principle of “economy” pushes analysis further than the principle of intelligibility which we have been considering. It suggests, as Mach† applies it, a value for the race as well as for the individual in what we have thought of simply as a psychological phenomenon. This suggestion is of the highest interest and importance, and as such may be gladly accepted. But when the same circumstance is made the ground upon which Mach is claimed by Professor James (in the article already quoted) as a Humanist, it seems necessary to determine what are the exact admissions implied by one’s applause. I am prepared to admit that the results of Science *have* this economical value; prepared to admit that by Natural Selection or in some other way Nature may have arranged that Science shall be pursued so that this value shall be secured to the race; but, as before, I hesitate when asked to grant that this relevance to purpose constitutes the *essence* of the results in question. And Humanism is nothing more than an interesting genetic psychology if we do not take it as telling us not merely the circumstances under which we come to *recognise* such things as thinghood, or the conservation of energy, but what they are prior to our recognition. My own view of the principle of the conservation of energy I have endeavoured to explain. It is a concept by means of which a definite range of given facts is made intelligible to an individual thinker. In consequence of this circumstance it has an economical value. Further, it is the property of “secondary constructions,” into which such concepts and the corresponding primary facts enter, that they lead to the “apperception” of new primary facts—reals or relations between reals—this being the external characteristic which distinguishes the scientific from other attempts to render the primary facts intelligible. Finally, the conception is a convention in that another could conceivably have been found to

* Mach, *Science of Mechanics*, 1902 ed., p. 555.

† See *op. cit.*, pp. 48¹ *et seq.*

render the same facts intelligible, and, if "scientific," would have led to the recognition of the same real relations between the real things. The conception, in fact, plays the part which Lotze attributes to all ideas—the part of a tool which fits the mind and also fits reality.

If pressed to consider also the case of thinghood, I should have first to remark that I find between concepts of this order and the concepts of Science a distinct break. In this I differ from Mach, who does not appear to distinguish the process by which we supply a core to a mass of sensations, and so create a "thing" from the process by which we make a secondary construction out of certain *data* by means of the concept of a transference of something ("energy") that remains constant in amount. We seem to have here the thought which Professor James expresses in his article on *Humanism and Truth*,* and the writers of the essay on *The Nature of the Hypothesis*.† According to this thought Reality is not the same after our judgment as before: it is "increased and elevated" by the act of judgment. The implication seems to be that scientific judgments simply continue a process which "common-sense" judgments begin. There are aspects of the two processes of judgment of which this notion of continuity holds good; we may grant to Messrs. Ashley and Dewey that the hypothesis is a predicate, and to Mach and Professor James that the concepts, both of "thing" and "energy," are economical. But, as I have already pointed out, "the secondary constructions" of Science which correspond to the "reality qualified by an ideal content" of the ordinary judgment contain no element that is not drawn from the common-sense stratum of consciousness. For example, if one body is cooling while another is simultaneously growing warmer, the secondary construction in which these primary facts are synthesised

* P. 468.

† In *Studies in Logical Theory*, ed. Dewey, 1903.

contains besides these facts merely the thought of another *thing* being transferred from one body to the other. On the other hand, the synthesis by which we bind the various qualities into the "thing" does not present us with anything analogous to this. The secondary construction is of a totally different character from the elements; the process does not reach its end by the ideal addition of a new element of the same type. Further, the hypothesis has, we have shown, merely a transient function. Setting aside purposes of exposition and convenience in conceptual handling, its function is to point the way to the discovery of new facts, including relations, and then to efface itself. Finally, at any moment it is at least ideally possible by criticism of the whole construction to separate the primary facts from the interpretative "embroidery," and to realise that the synthesis was not strictly inevitable. Whewell's *dictum* that "fact and theory have no essential difference except in the degree of their certainty and familiarity. Theory, when it becomes firmly established and steadily lodged in the mind, becomes fact" *—which is approved by Professor Dewey†—ignores this power of critical analysis.

Before quitting my argument it seems necessary to anticipate a cross-examination on what is my precise distinction between a common-sense judgment and a scientific judgment. A trivial example may make the distinction clear. If I say, "that man has a rolling gait," the synthesis has the inevitable character that is the mark of the primary fact, the common-sense judgment. If, on the other hand, I assert (on the ground of his rolling gait) "that man is a sailor," my synthesis has the secondary character which is not inevitable. If then you ask me if such a judgment is "scientific," I do not think I ought to hesitate to say "Yes" simply because the instance is trivial. The secondary construction is

* Whewell, *The Philosophy of the Inductive Sciences*, 1840, p. 45.

† *Op. cit.*, p. 164.

undoubtedly a reaction upon certain primary facts, and it has the property of leading to the observation of other primary "substantive" facts, and yet other facts, relations between these. In these respects it seems precisely like such a judgment as "this substance is copper sulphate," based upon an experiment in chemical analysis—a judgment which would generally be admitted as scientific. The former judgment, in fact, is related to the "unconditional universal," "All men with such and such a rolling gait are sailors," in the same way as the latter is, to "all things that have such and such properties are copper sulphate." Both these assert a "permanent connection of qualities in the Real"—that is, are the final products of a process in which primary facts have been unified, systematised, or made intelligible by a concept which has not failed to lead to discoveries of fresh primary facts without limit in its province.

I need hardly disclaim the pretence that I have done more than bring out a few of the salient features of the scientific process. I have regarded it as a conative process, with certain primary facts as *data*, and the making of those facts intelligible the *quocsitum*. I should say that I had derived my conception of the primary facts from Mr. Moore and Mr. Russell, did I not fear to do those philosophers an injustice. I have conceived the Objective world of primary facts as containing physical and psychical existents, and, in addition, subsistents—such as relations—which share with the former the characteristics of being regarded as "the same for all," and of having a certain relevance to human purpose, expressed by saying that "they have to be reckoned with." In the case of physical existents I have not hesitated to attribute to them secondary as well as primary qualities, regarding our perceptions as at least *aiming* at expressing some Objective determination of the thing which is independent of perception. While it is not possible to conceive what those Objective determinations are apart from our perceptions, it is possible to assert that each such determi-

nation (as, for example, as of "temperature") implies a definite set of relations between our changing perceptions of "hotness" and other simultaneously changing relations.

The aim of the scientific process as it occurs in the individual is to render the Objective in its actual determinations intelligible. This happens when primary facts enter into an "apperceptive system." They may be apperceived by means of any concept drawn from any other context of experience, and if by means of this concept the actual particulars of experience are systematised, the "end" of the process will have been reached. But if the process has been of the kind intended by the term scientific, it will have the further property of leading to other determinations of the Objective, and these further determinations are the actual achievements of Science, and its "end," therefore, from the universal point of view. Since primary facts present themselves for the most part in series, the most useful method of determining the Objective consists in correlating terms of these series with the members of the number series—the property of this series being that single members of it can be substituted for combinations of other members in accordance with definite laws easily applied. By means of such combinations it is often possible to characterise simply the relations between things, and to ascertain what changes in terms of relations can be regarded as complete expressions of those relations. Such cases typify the ideal of the scientific process which is actually exhibited in a large number of grades, which nevertheless are sharply distinguished from the processes by which the Objective itself is recognised—a fact which is claimed in support of the view of the unique character of the latter.

Finally, it may be claimed that the concept here defended avoids the error contained in the theories of Science given by Jevons and other writers, which have been justly criticised because they fail to represent the actual relations

between hypothesis and fact. My concept allows the hypothesis to determine largely what primary facts shall be apperceived, and admits that the fact before the individual, *i.e.*, the secondary construction, is constituted by the apperception. At the same time the implication that the Objective in this construction is an ideal upon which we can never actually set the finger, is rejected; and it is maintained that to a critical scrutiny the Objective reveals itself in ordinary cases, though in some cases it may not be easy to determine it without reference to the "confirmatory tests" of sameness for all and relevance to purpose.

VI.—ON A CERTAIN ASPECT OF REALITY AS INTELLIGIBLE.

By F. TAVANI.

THE claim of idealism to present a view of reality more intelligible than that presented by other systems becomes more difficult to sustain the more it tries to become monistic. Monistic idealism, indeed, is quite as unintelligible as any of the rival systems, which admit the supremacy of a unique principle, and at the same time make such principle undergo in virtue of an unexplained power, a series of real differentiations of itself. The operation of the differentiation of this unique principle, or of the integration of the different realities, if we start with these, is far from being intelligible, and the difficulty of recognising the work of such operation is particularly felt when the differences are not only between concepts, but between concepts and percepts. Therefore I will start with the positive facts that form the material of idealism, universally distributed in concepts and percepts, and as a relation connecting them I will assume only a correspondence or suggestion from percept to concept, and *vice versâ*. Such correspondence I will assume to be a positive fact, which has hardly any need of illustration.

In opposition to the characteristic of unchangeableness which presides in the realm of concepts I shall consider, instead of percepts, the wider field of *events* or *acts of being* under which percepts are enclosed. What constitutes these facts the special material of idealism is (α) the recognition, amongst concepts, of the special concept of consciousness, and of its correspondent act in the realm of the events. (β) All concepts have a common reference to this special concept, so

that it, as a term of such reference, is the condition, which once posited, all other concepts are potentially posited; and as the concept of consciousness and all other concepts are never posited save in correspondence with their respective acts, so the act of consciousness being given, the necessary and sufficient condition for the assertion of a complex of concepts and percepts connected with consciousness follows. But between the different concepts and between the concepts and their correspondent percepts, we recognise at first a mere relation of correspondence or reciprocal suggestion, and so far we have no right to assume that the relation between these different entities is anything more than this.

The concept of consciousness as defined by this simple operation of reference is for us nothing more than a certain condition, which being posited the assertion of the universal fact that "something is" follows. That *something* is within certain limits, and it is nothing outside of them, is the fact that I assume as the first element of a definition of the act of consciousness. Of these limits, those best known to us are time, space, and a self taken in its different moments of perceiving and thinking. The study of the specific connection of consciousness, as concept and as an event, with other concepts and percepts, forms the source of the knowledge of the reality of the terms there implied, beyond the limits of their reality which is immediately given. If such connection is broken, concepts and percepts turn into nothing—nothing not absolutely taken, but nothing of what they are in such connection.

That the concept and the act of consciousness suggest one another, can be easily seen, since, that consciousness possesses a definite and individualised act is a fact asserted whenever an assertion that something is, is made, and consequently consciousness is a condition of the assertion, *i.e.*, consciousness as a concept, and reciprocally the presence of such concept refers to the actuality in time of consciousness.

The same relation of reciprocal correspondence applies to all concepts and percepts, any percept suggests a concept and *vice versa*, and such correspondence is asserted, while all concepts and percepts are related to consciousness, but not because of such relation. It is a rule imposed on the reality of concept and percept in their relation to consciousness and in virtue of such rule concepts are objectively real, otherwise they would not differ from arbitrary phantasms to which no perceptual reality corresponds. Such correspondence taken, not abstractly, but in its actual function, distinct but not separable from concepts and percepts as related to consciousness, possessing as much evidence as these other two facts within the act of consciousness, I call the *idea* of something—while connected with consciousness it cannot be reduced exclusively to either of the other two facts, and it accounts for what these two facts may claim to possess in common. In fact, when we recognise the opposition between concepts and percepts, we acknowledge also that such opposition is merely partial, and not absolute. We acknowledge that they express for us two facts, which in a certain sense are identical, although expressed in different terms, and if such identity has any meaning at all, the identity being a fact which no one disputes, such meaning is fixed by and wholly contained in the correspondence in question. The identity of the facts which they express simply means the possibility for percept of calling out, every time it is posited, its correspondent concept, and for concept of expressing, every time that it is excited, a fact which compared with that expressed by percept we assume to be the same, in a certain respect. So I may describe my first position in the following terms:—When I say: (1) this paper is white, such fact besides saying that something is asserted to be real, involves as its correspondent (2) the assertion of an act of consciousness, and it is only in such correspondence that the two facts are joined by the particle *is*, and that *is* is assumed to have a meaning. The congruence between the two facts expressed by *is* cannot,

at least, in a first instance, mean more than a mere correspondence.

Moreover, in the same moment that fact one asserts itself as *being* fact two, in the meaning just explained, it refers also to a third fact in which the *existence* is asserted not of the white which is actually perceived, but of a white possessing a reality beyond the limits of the moment in which it is asserted to exist. Therefore reality asserted in such fact does not and cannot claim any connection with the act of consciousness. So in the same moment that there is asserted fact (1) and fact (2) and the correspondence of (1) with (2) and (3), appears also the disconnection of (3) with (2). The comparison of (2) with (3) might suggest only a possible correspondence of (3) with the concept correspondent to (2), such correspondence, however, cannot be matter of assumption. The disconnection between (3) and (2) is just as much evident as the connection between (1) and (2), and the evidence of this position must be either accepted or rejected in its entirety.

The entity in which (1) is spontaneously connected with (3) by a mere reference I have called an *idea*, because it seems to realise the characters of for-itself-ness and irreducibility to percepts, characters generally attributed to the whole of reality designated under such denomination, but if there is any historical standard of the meaning of such term, against which the use I am making of it offends, I do not intend to insist on justifying it, and I shall simply keep it for the brevity of the expression.

A certain reason for such use, however, may be discovered while we make a few remarks on this relation. If we accept Kant's conception of *idea*,* I believe that the relation in question deserves the name better than any entity realising a representation of the same kind as that which we generally attribute to *things*. If ideas "are necessary conceptions of reason to which

* Kant's *Kritik. Elementarlehre*, II Th., II Abth., I Buch., 2nd edition.

no correspondent object can be discovered in the world of sense," we can recognise no trace of this in concept or in anything else realising a representation as image. How can we assert of such entities that there *cannot* be a *correspondent* object in the world of sense? What meaning can we give to the word *correspondent* and on what ground can we assert the impossibility of a correspondence in the world of sense? While if by idea we understand an entity essentially of relational nature, Kant's conception may still have a meaning and a value. If by idea we assume the whole of reality, which asserts itself to be so, beyond the actuality in time of consciousness, then we must determine the possible place of such relation within such sphere of reality, in order to decide in which relation stands the relation in question to the assumed conception of idea. But whatever its claim may be to realise, or not, the nature of idea I am going to consider, independently of this question, how does this entity realise the nature of for-itself-ness, and what *rôle* does it play in the whole system of reality which is related to consciousness as to a common centre of reference. From these two points of view it will appear what is the power of such relation to lead to a synthetical, and at the same time intelligible view of the reality connected with consciousness.

A real is not a real for itself, whenever it refers to a real, other than itself, as a condition of its own reality. The function of conditioning may assume different particular forms, *e.g.*, that of activity, of causality, etc. Therefore the contrary of for-itself-ness is a nature referring to a conditioning term, and it is differently particularised according to the different individuality of the conditioning term, and the diversity of the conditioning function. So in order to fix the meaning of for-itself-ness, we must fix beforehand the term respect to which for-itself-ness can be predicated of a certain entity, and what is the particular relation of dependence which for-itself-ness excludes. If the reality of the conditioning term is wholly contained in and completely expressed by its *rôle* of conditioning in such relation, without

possessing any other individual character of its own, we should have to fix only the nature of the relation in order to obtain one determinate meaning of for-itself-ness. In our case we shall consider for-itself-ness in respect to a definite term, consciousness, which by definition we have assumed to possess a reality wholly contained in the rôle of conditioning in the most indeterminate and general manner the assertion of the fact "that something is." But as the relation which I intend to exclude is a lower individualisation of the conditioning function, so in this relation, the term although defined as a general condition, while considered in this more determined function, may be said to possess an individuality of its own, beyond that of being a mere term of such relation.

As in the reality which we are considering we have recognised a connection with consciousness as a concept and as an event, so we cannot mean by for-itself-ness absolute unconditionedness from any reality in general and from consciousness in particular, nor, for the same reason, can we attribute this to consciousness itself, since the first reality of consciousness is for us that of a mere indeterminate condition, having meaning only in such indeterminate connection.

The for-itself-ness worth considering, under such circumstances, is that which excludes dependence upon an active principle in general, and upon consciousness, as an efficient cause, in particular.

The system formed by a concept, its correspondent percept, and the vinculum that makes them correspond to one another, is independent of the similar system realised by consciousness, in so far as this might constitute an active principle causing others to be what they are. If by A we represent a concept, by α its correspondent percept, and by B and β the analogous terms of consciousness, I mean to say that neither B nor β nor the system ($B\beta$) is active towards the generation of any of the terms A , α ($A\alpha$), and consequently any A is independent of its correspondent α in so far as this might act as an efficient cause.

The reason of this consequence is easily seen, since every α realises a connection with β in virtue of which β represents a field of reality enclosing all the percepts, every percept refers to the act of consciousness and such reference says nothing more than this, viz., that every percept is an act of consciousness, therefore if we deny that β is an efficient cause of Λ so it is also of every α . Now, I am going to show that according to what we understand by *active* and what we understand by a conscious principle, the former cannot be predicated of the latter.

When we attribute activity to consciousness, we do not mean by it a merely isolated fact, but a principle in the same sense in which we speak of something as active. The self as a principle possessed of mental activity is generally assumed to be the principle in which we admit the nature of consciousness to be fully realised. I will try to show how groundless and unnecessary to the intelligibility of the world it is to assume in the self mental activity. These considerations however can be equally applied to any other concept, besides that of the self, with which we may express consciousness as an active principle. That self is a mentally active principle is the fundamental assumption through which idealism was able, or rather was compelled, to reach its final settlement in a monistic system. But, I believe, such assumption has no other ground than that of its apparent necessity. It seems to be of such self-imposing evidence that we seem unable to doubt of it without falling into a contradiction, and the reason is that doubt is already assumed to be such a fact as to imply necessarily mental activity of the self. The question is: does the fact, "that thought is a product of a mental self," possess the same evidence as the fact, "I think"? The fact that in the history of philosophy we do not find them always taken as equivalent to one another shows that their identity cannot be a matter of intuition. While the only ground for the impossibility of doubting would be that this fact is a matter of intuition, and

this seems to have been Descartes' ground, where he assumes that "thought is the immediate experience of self-activity under any of its forms." If the identity between these two facts is matter of intuition the question is closed, but only for those, who have the special sense of realising such intuition, others if they cannot see intuitively the activity of self in thought, must try to see it, if this is possible, in the act of Knowledge.

When this fact is considered as object of Knowledge, doubt not only is possible, as it is possible about any possible object of Knowledge, but the statement itself requires some criticism. First of all, "how can the self be active at all"? If self is active, whatever its activity may be, it must be different for the different types of consciousness in which it actualises itself, it must possess a specifically different character for the different acts of Knowing, striving, and feeling, and as these different acts are irreducible to one another, within the actuality of consciousness, *i.e.*, while connected with consciousness as an act, such activity must be within each of these acts irreducible or ultimately individualised. It is within the limits of each of these types that self and activity can be compared and joined to one another so as to form a synthesis possessing any meaning. Activity, as presented in one type, *e.g.*, in conative consciousness, cannot be compared with activity as realised in cognitive consciousness, although they might be reducible to unity beyond the sphere of reality connected with consciousness. So in reply to the general question: "how can the self be active?" we must premise that if self is active, it must possess a specific activity for each of the different types of consciousness, and consequently in order to inquire how can the self be mentally active we must consider both these two terms activity and self, within cognitive consciousness. We cannot predicate of self, taken as a mental fact, activity as perceived within conative consciousness, but only activity as a mental fact.

Now if we analyse our idea of activity, I believe that it reduces itself to a correspondence either between two other

intellectual facts, or between a feeling in conative consciousness and an intellectual fact correspondent to it. Taking it in the first sense we have the individualisation of a principle which we call active and some other fact conditioned by the former, which we call the effect of activity.

The correspondence is only from the individuality of what is considered as the active principle to the individuality of its effect, but not reciprocally, and as condition for the efficacy of activity there is required a character of homogeneity between the active principle and its effect, *e.g.*, heat is intelligibly an active principle in the phenomenon of dilatation whenever the nature of heat and the fact of dilatation are considered as the different expressions of the same fact, *viz.*, of the molecular inertia of matter, or of some other more universal principle. It is well known that on this postulate of homogeneity is based the intelligibility of the physical world, and without it the principle of causality itself would rather increase than explain the mystery of the succession of natural events. Now according to such conception of activity, self cannot be said to be active in any way towards the not self. Of the two conditions mentioned above, that of correspondence is evidently realised between self and not self, but we cannot say that self and not self are homogeneous so as to be reducible to a common principle identifiable with either of them. There is between the two terms a necessary correlation, but still there is an irreducible element, which supports their respective individualities, otherwise there would be no reason for their individualisation and correlation. Even recognising in the self a self-determining activity—still this nature cannot be predicated of self as a thinking principle, and still less can it be recognised as determining the not self in an equal sense as it would determine itself. It remains to see whether the other conception of activity which is excited by the feeling of conation is more successful in leading us to recognise in the self a mental activity. In this conception we notice some elementary facts:

(α) Conative consciousness in its actualisation is wholly concentrated and unified in the act of a unique principle; identifiable with a self, and gives rise to no dualism between two terms of independently definable individuality, as happens in cognitive consciousness. Whatever stands outside of the act of conative self is, without ambiguity, heterogeneous to it, and such heterogeneity is perceived by the conative self through the inertia which it opposes to the tendency of out-determination of conative self. (β) Moreover, we recognise that the reality of the act of conative consciousness is not wholly exhausted within an internal act, but there is a relation, hard to define, but still generally admitted as a correspondence between an internal act of conative self and a movement of our living organism, subject, within certain limits, to the control of the volitional self. Such correspondent bodily movement we call out-determination of the volitional self. Although the nature of such relation calls for criticism, its existence cannot be left in doubt, and this is all I want to assume here. (γ) Any real possessing the character that excludes the presence or influence of the volitional self I call objective, objectivity being assumed to possess a meaning relative to the willing self and not to the thinking self. Therefore our organism plays an objective *rôle* as the external stimulus, with which it co-operates in forming the process of sensation and a subjective *rôle* in obeying the willing self in carrying out the out-determination of the latter.

Briefly, in the second conception of activity its elements are a conative self on one side and an objective reality, ultimately opposed to it, within the act of consciousness, on the other side, so that, according to this view of activity, thought is a fact which should side with the objective reality, because although thought may be voluntarily excited, still its laws are objective in the sense just explained, and the self present in the act of thought is the correlative of its objective nature, viz., the conative self, which once excited in the objective process of sensation accompanies the following moments of the process

of thought. So even from the application of this conception of activity, I believe, we cannot derive anything in favour of the mental activity of self. If we do not recognise as a first fact immediately given, a creative power of the self towards the not self, the only relation then which we can recognise as immediately given is that of a reciprocal correspondence, in which the self is not always and necessarily the first term of the correspondence.

The relation of mere correspondence, which appears as a reciprocal suggestion in the actualisation of consciousness, is the first and the only relation at work in a general and intelligible synthesis of the special type of reality with which we are concerned. The characteristic of such type is, as we have remarked, its connection with consciousness, but as such connection does not assert itself as an essential factor of what we call real, so the type so connected must be assumed as a special type of reality. The special connection with consciousness, however, is only a special case of the universal law of correspondence which binds together the individual entities belonging, on account of such connection, to the same domain of reality.

An important specialisation of this relation is the character of intelligibility proper to such field. Intelligibility is not a natural feature of monism, I believe that a monising tendency is rather in opposition to that of making things more intelligible. We start with individual entities given with a certain amount of evidence, if they are all given with an equal amount of evidence there can be no character of intelligibility. But things are intelligible in so far as their reality shows two essentially different aspects, one in which the thing shows a reality completely given and definitely given.. the other is that in which reality is not given, but simply suggested by something completely given. Intelligible is an attribute of things possessing only the evidence of suggested reality, they are in their indeterminateness as objectively

real as is the relation which connects them with the immediately given, and an intelligible thing becomes *intellectual* whenever it comes to assume an evidence equal to that of the immediately given, which excites the suggestion. It is not necessary for this purpose that there should be a relation endowing either of the two terms with any specific creative power, but it is necessary and sufficient that the relation should assert itself spontaneously and objectively, taking this word in the meaning expressed above. Indeed, if we were to admit such productive principle, acting as an efficient cause, we should not resolve, but simply remove further the problem of intelligibility, while any fact asserting itself with a character of objectivity does not appeal for its explanation to any of the facts forming the series of causes suggested by any fact apprehended as a mental fact. Any objective fact entering such series closes, so to speak, the process of intelligibility, and for this reason a mere relation of correspondence asserting itself as an objective fact serves for this purpose better than causality itself. This concept when developed leads to *divergent series*. The two kinds of real, viz., that which is given and that which is merely suggested, each in its own sphere possess a specific evidence, they refer to one another not to sanction their specific reality, but to complete a reality of which they seem to be partial aspects.

That which must be accepted as a fact immediately given cannot be defined through any rule or criterion, but is a first fact in the actuation of consciousness. That something is A and something is B are facts immediately given, and that A is not B is evidently a fact not naturally suggested by the former two, but it is also immediately given. The recognition of a logical nexus between the terms is the last to come in the process of the objective actuation of consciousness. On this remark stands the irreducibility to monism between self and not self. they are both equally immediately given, though for the expression of their logical relations one of them only is

required. From this view of reality as intelligible it is easy to see which is the relation necessary and sufficient for establishing the character of intelligibility and for passing from the intelligible to *intellected*, either when the immediately given is a concept or when it is a percept. The work of building up the contents of ideas, envisaged as logical models, as is done in physics, offers many illustrations of the way in which the relation, which we consider as the category of intelligible reality, is applied. The individual terms irreducible to one another, of our relation of intelligibility are (1) concepts and respective percepts coupled so as to form each couple a system expressing one fact; (2) these individual facts irreducible to one another. After what has been said it seems hardly necessary to notice that between concepts and percepts there is excluded all relation of reciprocal derivation. When I see a flame and I think that there must have been a cause of it, both the perceived flame and the suggested cause have an evidence of equal weight and equally objective for both, and independent from that of each one of them. I do not mean to say that the concept is true independently of the percept; the meaning of such word we shall soon consider, but I intend only to exclude all meaning of derivation. If between the two facts we were to recognise a relation of derivation, the disproportion between the two terms of such supposed relation would become at once apparent. If we were to admit such relation and assume for such intent one of the two terms as type of reality, it is evident that the other would be confined to the world of illusions, but while we recognise a mere relation of reference, we are prevented from assuming either of the terms as type of reality to measure or correct the reality of the other one, they are essentially incommensurable with one another.

Considering now these two elements from another point of view we can also say that percepts are the elements of the that of a thing, assuming the that of a thing to mean a factor serving to distinguish one thing from another, comparable to

an isolated point which cannot be helped being noticed. Concepts are the elements of the what of a thing, both terms the that and the what of a thing are referred to one another by the general operation of reference, taken in the meaning fixed above, according to which each term possesses in itself the sanction of its own reality.

We must not conceal from ourselves that there are several things which might predispose us against a theory of concepts *per se*, or of ideas *per se*. Some of these present themselves to us as contrary reasons, others appear to be rather prejudices. The former refer to the impossibility of such independence of reality, the latter appeal to the impossibility of conceiving anything as real apart from perception. The latter hardly deserve any consideration, but in reply to the former we must remember that perhaps the main characteristic of Kantian idealism consists in the recognition of the possibility of a reality independent of perception, and independent of any activity in time of consciousness or a self. The main defect of Kant was that he attributed to mind still a function in time, and such function could not guarantee the stability of the concept of mind itself.

There remains to be considered the possibility of such a reality independent of the transcendental self, but in this case the self is nothing more than an idea, and the problem enters on the wider one of the relations between ideas which we are now going to consider. The entities, which I have called *Ideas*, are the ultimate units of the material of the world as intelligible. Wherever we turn, however we try to reach an ultimate element of reality, we meet a concept and with it an idea, whose reality cannot be either sanctioned or defined, but through itself, whose evidence is just as much self-imposing as that of the concept and the percept. Every idea, while possessing an individuality of its own which is essentially given, and essentially true, remains connected in its individuality with others, so that it cannot be completely seen

exclusively in itself, but in its reference to others. It is through such relation that the reality of the idea, which is not given, is approachable to our inquiry. Here, as the last part of these remarks, I will simply outline a general view of the relations between the chief particular ideas and try in this way to give a synthetical view of reality expressed through the general relation which we have been considering.

The initial fact of any reflexive view of reality is essentially an idea. Whether we start with an action or with a statical fact, be this the self or something different, such fact, taken in its entirety, is an idea, that is to say, a fact consisting of single and discrete moments, connected by correspondence to some concept, which forms their unchangeable meaning, transcending the limits of the act of their perception. Of such character is the reality of the self or of any other fact which we may start with. In order to reach a view of the objective connection between ideas the choice of a beginning is practically of little importance: such choice may have an importance but merely methodical. Percepts of ideas affect us all in an unsystematical manner, and all of them indistinctly point to their correspondent concepts; of these concepts the one which is universally pointed out is that of reality. Reality, in so far as it realises a unique nature, is the common what of all different things, the *thots* of this idea are the multiform reals.

They are all grouped under this first idea, which is the first stuff all things and ideas are made of. We call a thing the type of correspondence in which to each *thot* corresponds a *what* only and reciprocally, therefore they are real in the act of their *that* only. While they are real we call them existents. Existents may be compared to linear entities, they are asserted in one direction only, outside of such direction they are nothing; they may be symbolically represented by a star of lines converging to a common centre from which alone they are seen to be real, such centre can be represented as our

personal perceiving self, as time or as space. An existent is an event in respect to time, a distinct entity in respect to space, and a percept in respect to self, as an event it realises a correspondence with time as its concept, and similar correspondences are realised with concepts of space and of self. Accordingly, the *thats* of ideas may be existents, or simply events, or merely a distinct reality, or percepts; of course, if it is a percept it is also an existent. Not all ideas, however, have existents as correspondent *thats*, these may be simply individuals bearing no definite evidence of existence.* *Existence* is itself an idea, whose *that* encloses the whole reality asserting itself as an act of consciousness, viz., suggesting a connection with such an act.

Once we recognise as an ultimate fact within the reality which we are considering the relation of correspondences between concepts and percepts, this relation itself must be considered as an idea. It is of the nature of such idea to fix the meaning and the measure of the intelligibility of reality. It shows the fulfilment of such task first within reality mathematically considered, and it aims, on account of the freedom of its terms from any determining condition, to reduce under its expression, reality considered even from a more universal standpoint; and through the evidence, which it possesses as a positive fact, I believe, it may with more success take the place of the old categories of intelligible reality, such as those of power or cause. Causality itself, in order to become intelligible, had to be called back to this more elementary conception, cleared from all idea of an efficient power or of any other mysterious agency.

A very important and universal individuation of this

* It is worth noticing that reality, expressed as idea, in the meaning above, is a domain of reality in which the principle of contradiction is true, since from such domain there are excluded as unreal all things whose terms would be so referred to one another that to one and same that there would correspond more than one what.

correspondence is the idea of *truth*. Truth is an idea to itself, whose content is the nature of all ideas objectively real, either immediately given or gradually showing their objective meaning through the objective laws of thought. The that's of this idea are the single objective ideas themselves. True is predicable of a reference between two terms, one of which besides asserting a reality complete in itself, suggests another beyond it, possessing in its indeterminedness an equal evidence with that in which it is suggested. The suggesting reality is essentially and completely an event, the suggested reality possesses only the connection or suggestion which makes it appear joined to an event.

In this general survey of the reciprocal relation of ideas, it is worth noticing that truth is an immediate individuation of the general idea of correspondence, and not the individuation of it established through the idea of knowledge. The idea of knowledge supposes that of truth and not *vice versa*. Indeed, when I see an object as being what is given in the first intuition of it, as when I see a pen and say "it is true that this is a pen"—the truth of such fact is simply matter of intuition. It is when truth points to a fact which is simply suggested that we lose the help of intuition in recognising what is true, and it is here that we enter the sphere of possibility of error, that is to say, of taking for true a reference which would appear to be unreal, if its two terms were to become both objects of intuition. In the absence of intuition of truth what is left is the doubt whether anything is true or not, and this leads us to examine what are the means that may lead us to it and what those which may prevent us from reaching it. In the attempt to recognise such means we reach the consciousness of the presence of some possible subjective factor of truth, that is to say, of a knowing faculty within us—I believe that the existence of such faculty comes to our notice first as a factor separating us from truth rather than as a means capable of leading us to it. To establish concretely the content-

of truth, or better to determine the field of reality which is both true and knowable, would be to establish a criterion of truth and a field of reality under its domain.

We must fix as plainly as possible what is given and what is simply suggested and forming still the object of research about the nature of ideas, in order to understand as much as possible what is the possible truth enclosed in their nature. Any idea is given as a distinct entity, as a whole system to itself, and it realises in itself a principle which makes it to be what it is, and nothing else, this we shall consider as the self of the idea and its reality is immediately given with that of the idea itself. Both metaphysicians and physicists presuppose it for the study which in their respective lines they make of ideas. For science the self of an idea may be described as the sum of all distinctive characters of the idea, whether such sum be integrable into a single entity, while remaining still empirical, and capable of surrendering the whole of its reality to the most refined means of observation, or whether it is not susceptible of integration at all. For metaphysics the self of the idea is localised in what makes the idea one and the same object, either for individual or for universal experience. It resides in what holds together the different elements of the idea, so that any one of them being posited the whole idea is posited as well. Such term contains the whole truth of the idea, it is true as the idea itself. it cannot be an object of research, but it is an ultimate datum which metaphysics simply recognises. What is the object of inquiry is not the truth of ideas but the relations of their truth to existence, and this *rôle* belongs to sciences. The criterion adopted by science for this purpose is that of *consistency* between a possible concept realised by a logical model, and a correspondent percept afforded by observation. But, as is well known, such criterion is not sufficient to show the truth of an idea, if we take, for example, the mechanical and the electromagnetic theories of light, both of them are consistent with the facts, but which is

the true idea of light according to *consistency*? This criterion, however, keeps its value, if we admit that the aim of the sciences is not to inquire after truth, but simply to enlarge the perceptual field of the particular idea of existence. The idea in the content of which the relations of the truth of ideas to existence are seen to be real is the idea of *validity*. The work of science is, as I have noticed, to establish the validity of the content of ideas, viz., to define the relations of them to existence. Validity, like truth, is an idea, its content is a relation, through which the content of an idea, considered as a logical model, is bound to existence by a suggestion—existence being the idea in which the percepts or thats of all other ideas are determined. The thats of the idea of validity are the single connections of the contents of ideas, considered as logical models, with existence. These connections are the means through which we can pass from the contents to the correspondent existents of ideas, considered as logical models. It is evident that validity essentially presupposes the ideas of truth and existence. The truth of an idea is presupposed in all the relations of the idea to existence. Validity shows one side of the truth of an idea, the side in which the idea touches, so to speak, the idea of existence. It must not be forgotten that validity and truth are two ideas quite distinct from one another, and both distinct from existence. Existence does not support truth, the criterion of consistency in which this might seem to take place might at the very most bear upon the validity of the function accomplished by the content of the idea in leading to the discovery of an existent. So the discovery of something that has caused a certain effect does not confirm the truth of the principle of causality, but it only bears upon the validity of its relations to existence. Nor does the reality of an existent receive any sanction by its claim to truth. As we have noticed, something cannot be asserted as true unless there is something already asserted as real. We may compare the relational nature of validity to a bridge between the truth of an idea

and existence, one end of which is moved by the ceaseless flux of existence, the other lies unmovable in the region of truth.

Time does not affect truth but only existence, so that if a self could be conceived out of existence, and placed in the unmovable region, the reality present to him would be independent of the variable time. While if validity were severed from this relation and sought in either of the two terms, viz., in truth or existence, we should find ourselves in face of an insoluble problem. Validity cannot be identified with truth, because while that bears essentially a relation to existence, truth, if it has any meaning at all, bears no relation to existence: existence and truth, as already noticed, are reals independent of one another, although they can suggest one another. Nor can we identify validity with existence, since existence by itself is deprived of any character of validity, to obtain which is required the co-operation of a real essentially transcending existence. Whenever existents would seem to show the validity of anything, there is always the question left unsolved whether the validity shown by many different existents will be verified in general.

The act in which the relation of existence to some other idea makes itself manifest in the sphere of existence is the act of knowing. Whether we define knowledge as the product of some activity of the self, or as a mere correlativity between two terms which we call subject and object, we are always asserting in it some relation to existence, and all that forms the object of possible knowledge realises a relation to existence capable of appearing within existence. So what is absolutely independent of existence, as is the truth of ideas, is not a possible object of knowledge. The problem of knowledge is essentially the problem of defining the relations of ideas to existence, but as existence is not a simple idea, but one asserting the reality of the elementary categories of space, time, and self, so an attempt must first be made to define the relations between

these three elementary ideas. These relations will show in a better light the idea of existence, and thence it may be attempted to define the relation of any other idea in general to that of existence. Beginning with the self, our personal self, besides being perhaps something else than idea, is an idea as well, like space and time it is one of the factors of existence, and as such a necessary condition of the reality of existence. Its content shows intuitively the unity of itself, its that is the series of its time actuations. The problem of defining the content of such idea has attracted the special attention of idealists since Kant pointed to this content as containing a possible solution of the problem of knowledge. As I have endeavoured to show at the beginning of this paper, there is no ground for attributing to self as idea an efficient activity for determining the reality asserted as concept or as percept, and this is a point which must not be forgotten in defining the independence of ideas from the reality of the self. According to what I have said ideas are related to self, as idea, but independent of it taken as an active principle. In their relation to self as idea they are what they appear to be in the actuation of consciousness, in relation to the self as a conative principle they assert themselves as objective. To try to know their reality apart from their relation to self would be a self-contradictory attempt. The reciprocal correspondence between self as idea and any other idea is maintained even when both terms, considered in their time actuation continuously tend to a limit stage of nothingness.

If we follow the self up to the most rudimentary stage of its actuation, we may, with good reason, say that there is a correspondent rudimentary idea of space or time, and reciprocally to a rudimentary stage of these there corresponds a rudimentary act of the self. The same relations between space, time and self, which subsist at a limit stage of these three elements, subsist also, in a fuller light, in the stage of the individuation which they reach in the development in time of the consciousness of existence. As for the relations of existence to other

ideas in general, we know of them nothing more than what is asserted with the act of consciousness, and with this act such relations appear to be simply those of suggestion made by the content of an idea towards an existent. Since the relation of any idea to existence is identical with that of the concept of an idea to its percept, which, as we have seen, is that of a mere suggestion.

The self to which ideas are related is not only an idea but the willing self as well, and in respect to this I have defined the idea of objectivity. Correlative to this idea stands the idea of subjectivity, the content of this idea embraces the willing self in the whole of its domain, viz., with its power of out-determining itself through our living organism, and with the correspondence which connects it with self considered as a mental fact. The moments of the willing self are the terms of a double correspondence, in one the series of the correspondent terms are mental facts, in the other they are mechanical movements of our organism. To the latter kind of correspondence we may trace the idea of causality, if by causality we mean a correspondence between two terms possessing in common some factor of individuality, and provided that mechanism is conceived to be a phenomenon not absolutely opposing the nature of the willing self. Without these two conditions causality loses its positive character, which makes its reality to be recognised as a special correspondence within experience, and loses all value as a category of intelligibility in the physical world.

The other correspondence mentioned above, connecting the individuations of the willing self with a series of mental facts is the expression of the idea of purpose.

I will close these few considerations, which, I believe are susceptible of a wider and deeper treatment, with a remark about the logical nature of the relation under consideration. When in this reference we abstract from the character of objectivity which we find it invested with, the relation becomes

a merely logical one. It is evident that the possible terms of such relation, when the character of objectivity is suppressed can be but two concepts since any correspondence between a percept and a concept is strictly objective. The two terms of the logical relation so obtained, are comparable to one another, because they are built up of common elementary concepts or categories. Such operation of referring them to one another we call judgment. If this reference is objective, judgment objectively puts on the character of truth, and if between the two percepts correspondent respectively to the two concepts of the judgment there is an objective reference also, the character of truth is matter of intuition. But, if truth, which is suggested by the objectivity of reference between the two concepts, is not matter of intuition, its truth is no more controllable by us than that of the idea which the objective reference claims to represent. But if there is given or reached an idea with a character of truth, such character is predicable also of all the single references or judgments contained in or objectively flowing from such idea, and if we succeed in showing how the reference of an idea to the predicable *true* as to its own natural character, is an operation not involving that of judgment, we can see how a theory of judgment is subordinated to that of idea, taking this in the meaning explained above. The dependence of a theory of judgment upon a theory of the idea can be reduced to two main points: one regarding the possibility of forming a judgment, if an idea can be given independently of judgment: the other regarding the truth of judgment, showing that its truth is ultimately reducible to the truth of the idea. Now the main and general operation of reference through which an idea claims to be true, is not necessarily a judgment, although judgment is essentially a particular case of such general operation, so even in this way we might be led to consider the idea as the entity enclosing in itself the unity realised by judgment, and consequently as the unit and ultimate datum of reality as intelligible.

VII.—TIMELESSNESS.

By F. B. JEVONS.

“We bear Time to his tomb in Eternity.”

THE words are successive—when we come to think of it, but the line is viewed by the mind as a whole. The succession of the words may be the given fact, and the association of them into a whole may be a subsequent proceeding. Or, second, the line may be the given fact, and the dissociation of it into separate words may be the subsequent proceeding, just as the dissociation of a word into its constituent syllables or letters is an analysis to which we may subsequently, though we do not always, proceed. Or yet again, in the third place, conceivably both the succession and the simultaneity may be not only given, but also ultimate fact. Or, fourth, time-distinctions may indeed be given, but may be appearance, false appearance, and Timelessness the ultimate fact.

I. I will take first the view that the words are really successive, and only appear to be simultaneous, or a unity, or a whole, or non-successive—whichever way you choose to put it. On this view they appear in what is called by Mr. E. R. Clay (*The Alternative*, p. 167), “the Specious Present.” He says: “all the notes of a bar of song seem to the listener to be contained in the present. All the changes of place of a meteor seem to the beholder to be contained in the present. At the instant of the termination of such series, no part of the time measured by them seems to be a past.” This Specious Present “is really a part of the past—a recent past—deceptively given as being a time that intervenes between the past and the future.” The notes, or the words, only seem present: they are

really past, in spite of the fact that every one appears present. Professor W. James (*Principles of Psychology*, I, p. 610) quotes Mr. Clay and adopts the theory of the Specious Present: it is "a duration block." "The experience is from the outset a synthetic datum, not a simple one." "The original experience of both space and time is always of something already given as a unit, inside of which attention afterwards discriminates parts in relation to each other." The number of successive impressions which can appear to be contained in the Specious Present seems to be differently estimated, and has no importance for the present purpose, as the Specious Present does not really last from six to twelve seconds—the events that succeeded each other in those seconds appear to be presented all together in the Specious Present, but that is mere appearance, such a present is "specious" not real. This seems to be the view of Professor Ward also, who, in the article on Psychology in the *Encyclopædia Britannica* says, "in reality, past, present, and future are differences in time, but in presentation all that corresponds to these differences is in consciousness simultaneously."

The position, then, is that there are differences in time, viz., the past, present, and future: and that in consciousness there is something which corresponds to those differences, but this corresponding difference is non-temporal, for all that corresponds to the time-differences is in consciousness simultaneously; and, therefore, since past and future cannot really be simultaneous, whereas what corresponds to them in consciousness is simultaneous in presentation, the differences in presentation are themselves non-temporal, though somehow they correspond to real differences in time. What is known, therefore, is the non-temporal differences. What is assumed is the existence in reality of time-distinctions corresponding to the non-temporal differences. First, then, we have to enquire: granted that the reality of time may come to be known, in what way do the non-temporal distinctions which are given simultaneously in

presentation, warrant or compel us to infer the existence of time-differences corresponding to them, that is to infer the reality of time, or to assume its reality? Next, if the Specious Present is only apparent or appearance, what is the nature of the real present?

As to the first point, Volkmann (*Lehrbuch der Psychologie*, II, p. 12) calls attention to the antithesis "dass die Vorstellungen A und B, um in Nacheinander vorgestellt zu werden, d.h. damit die Vorstellungen nacheinander erscheinen, muss ihr Vorstellen gegenwärtig sein," that is, as Professor James interprets it (p. 629), "If A and B are to be represented *as occurring in succession* they must be *simultaneously represented*; if we are to think *of* them as one after the other, we must *think* them both at once." What seems to be implied is that (1) A is succeeded by B—idea B succeeds idea A, but there is thus far no idea of succession; (2) A and B are next "simultaneously represented"—neither, apparently, is present any longer; both are re-presented; and, because they are re-presented together, we are able to *think* of them as one after the other. It would seem, then, that in stage (1) we have no idea whatever that there is any succession. Now (a) if we do not know that there was any succession, we have no right to say that A was succeeded by B; (b) if we know that A was succeeded by B, it is incorrect to say that we have not the idea of succession in this stage. But (b), if admitted, makes it superfluous to go on to stage (2)—we know of the succession, before the simultaneous representation takes place; and it is not from the simultaneous representation that we infer the succession. So let us adopt (a). Then in stage (1), whatever else we know about B and A, we have no idea of their succession. As Mr. S. H. Hodgson puts it, in a passage which will be quoted again later, "in an isolated moment, we could not tell which part of it came first"—in the isolated moment A B we could not tell whether A or B came first. It is in stage (2), when their re-presentations are simultaneous, that we think of them, or interpret the presentations,

as having been successive. But what is the ground for so thinking them? They are given as simultaneous. Up to this stage, we have not even the idea of succession: granted that we get it somehow at this stage, what is there to lead us to believe that it is a valid idea and not a false inference? Volkmann's argument apparently is "if A and B are to be represented as *occurring in succession* they must be *simultaneously represented*." That may be so, or it may not. But the fact that they are represented as occurring in one way cannot be in itself a decisive proof that they really occur in a totally different way.

In Volkmann's argument, the differences between the re-presentations are temporal. In Professor Ward's the differences are non-temporal, as we have seen, and are differences in presentation. At the back of Volkmann's re-presentations lay presentations. At the back of Professor Ward's presentation lies reality: differences in time are in reality, what corresponds to them is in presentation, and is non-temporal. But if we seek to find in these non-temporal distinctions anything that will prove that there are time-differences corresponding to them somehow, we shall be disappointed. In presentation the non-temporal distinctions are given simultaneously; but how or why we should infer from that fact that the temporal differences are not simultaneous, does not appear clear. If we confine ourselves, as at present we are doing, to our presentations, and if in our presentations we come across none but non-temporal distinctions, then we have no experience of temporal differences; and so, no warrant for assuming them to exist. Why do we, in order to explain the non-temporal differences which alone are presented to us, resort to the hypothesis (for from this point of view it is nothing more) that, outside, away from (we cannot, without begging the question, say "before") the non-temporal differences of presentation, there are time-differences? and what exactly are these "time" differences, from this point of view? On what ground are they supposed

different from the non-temporal distinctions which alone are presented to us? How do we know that they even exist, if they do not occur in presentation? and how do we know that they correspond somehow to the time-differences and do not correspond exactly? Of course, if they do correspond exactly, then past, present, and future co-exist in reality as they do in presentation, and no otherwise. That, however, is the second of the four possibilities which I am considering; and I shall deal with it shortly.

Before doing so, I must notice that Mr. L. T. Hobhouse, in his *Theory of Knowledge*, when he is discussing "the contents of Apprehension" (pp. 50 ff.), comes to the conclusion that "we must admit that successive facts are present to one and the same act of apprehension"; and, paradoxical though it may seem, "the immediate past remains actually present to the apprehending consciousness." This, then, assumes that the change from immediate past to actual present is a change which goes on in reality, and of which a consciousness may (or may not) have apprehension. That assumption may or may not commend itself to us when we come to consider it. Anyhow it seems to make the change from past to present a change that goes on quite independently of the consciousness: and to make it the business of the consciousness to apprehend the change; and it seems to present the difficulty as being: given the change from past to present, how does the consciousness apprehend it? And the solution offered by Mr. Hobhouse is that to the apprehending consciousness "the immediate past remains actually present." Now, without venturing to say how Mr. Hobhouse would interpret his words, we may say that they are patient of being interpreted to mean* that, whereas to the apprehending consciousness the immediate past remains actually present, in reality it does not, i.e., that the past cannot actually be present, the "now" cannot in reality be "not now," but to the apprehending consciousness the past may appear present, though it cannot really be so.

To understand how the past may appear present without really being so, we may borrow an illustration from Mr. Hobhouse. Assume that an act of apprehension occupies a second; imagine a process which lasts a second, and consists of four stages—A, B, C, D. Each of those stages is over before the next begins; yet “the mind views the process as a whole”: the whole of the process is apprehended at once—a single act of apprehension apprehends it and its parts. But, though the mind views the process, or rather its parts, as simultaneous, still “whether as an event independent of consciousness, or as an occurrence in consciousness, A is certainly not contemporaneous with D.” That is to say, A B C D are in reality facts succeeding one another: A, even as an occurrence in consciousness, is not really contemporaneous with D, yet the two are or appear to be simultaneously presented to consciousness. The presentations, A B C D, are successive, but “at last” they are simultaneously presented to consciousness: “at last, the whole A B C D as facts succeeding one another are simultaneously presented.” As an occurrence in consciousness, or as an event independent of consciousness, they are “certainly not contemporaneous,” but they “are simultaneously presented.” To the apprehending consciousness, therefore, the past appears simultaneous with the present, the “not now” with the “now”; but they are certainly not contemporaneous, they are only “simultaneously presented.”

“The mind,” then, Mr. Hobhouse is clear, “views the process,” A B C, or past, present, and future, “as a whole.” But *why* the mind should view past, present, and future as simultaneous, or present them simultaneously, when they are really successive, Mr. Hobhouse, as far as I can make out, does not explain. Still less, I think, does he prove that the time-differences are not in reality as they are given in apprehension *viz.*, simultaneous.

Still, as the argument is that in reality past, present, and future are successive, and are simultaneous only in appearance,

or as presented, or in the Specious Present, let us see if the Specious Present is a present help.

Past, present, and future are presented or given together; and it is desired to prove that they do not exist together, but only appear so to exist. Now, the Specious Present, I suggest, affords no such proof. It does not prove, it merely asserts, (1) that the presentation in question is appearance, and (2) that the Specious Present is not present, but (in Mr. Clay's words, already quoted) "really is part of the past." It assumes then the very position that wants proving, *viz.*, that time-distinctions are real: it does not prove, it simply assumes, them real. The only question therefore is whether it is a self-consistent assumption, or one which being inconsistent with itself must be dropped by us. Now, it assumes the reality of succession: it assumes, that is to say, that the past must be over when the present begins, and that the past cannot be present, even to us. And it goes on to say that the Specious Present "really is part of the past." From which it follows that it cannot be present to us. If, indeed, it were now present to me, giving me an illusory or delusory picture of temporal events, it would be present and it would be "specious." But it is "really a part of the past": and, if so, it cannot consistently be held, by those who believe in the reality of time-distinctions, to be present. By them it must either be rejected as inconsistent with their belief in the reality of time-distinctions: or, if accepted, be accepted as proving that time-distinctions are not real, inasmuch as it is really present, here and now, and yet is "really a part of the past."

Again, has the Specious Present a time-length? If it really is from six to ten seconds long, as psychologists calculate, then it is so not only in appearance but in reality, and is not merely "specious." But, once more, this gives up the contention that past, present, and future only *appear* to be given together. Then let us take it that it has not really any time-length; and that it is "specious" in appearing to have a duration which

it does not really possess. Let us recognise, in fact, that the intuition of duration does not necessarily imply the duration of intuition. The question then arises whether the Specious Present is really present; or, if we come to that, what do we really mean by the present? If the apparent present is appearance, what is the nature of the real present?

What is the real present? Mr. S. H. Hodgson (*Philosophy of Reflection*, I, 248-254) says, "strictly speaking there is no present: it is composed of past and future divided by an indivisible point or instant. That instant, or time-point, is the strict present." Let us say, divided by a vertical line, having length but no breadth. One side of the line is the past, the other side is the future; but the line has, strictly, no breadth—the past touches the future; the past is one side of the line and the future is the other side, and between them there is nothing. Indeed, there is no between: "strictly speaking there is no present." Yet this line—inasmuch as it consists (if a non-existent thing can consist of anything) only of the meeting of past and future (and the past exists no longer, the future not yet; and the past did, the future will, exist only by becoming present, i.e., by becoming a non-existent thing)—"is a sequence of different feelings." It may be a minimum, but, inasmuch as it consists of present and future, "this minimum has duration": "a former and a latter are included in the minimum of consciousness"; and "time-duration is inseparable from the minimum, notwithstanding that, in an isolated moment, we could not tell which of it came first."

II. I think it must be admitted the view that past, present, and future are really successive has difficulties: "strictly speaking there is no present," and what appears to be present "is composed of past and future," of which one exists no longer and the other not yet. Indeed, it might even seem from this that time is wholly illusory: but it would be premature to jump to this conclusion before considering the second of the four views which I am proposing to examine. The second

view is that past, present, and future not only are given together but do really co-exist. It is not denied that they succeed or appear to succeed one another; but it is maintained that they co-exist in reality, as they co-exist in appearance. The question may then be asked: if past, present, and future really co-exist, why do they appear successive? That question, however, need not now be put: if it can be shown that they really co-exist, the difficulty of understanding why reality should be different from its appearance will not weigh against the demonstrated fact that co-existence is the reality. That question may stand over. The present question is, do they co-exist? We know they are, or appear, successive; we want to know whether they really co-exist. Is it an inference, or is it a given fact? It would hardly seem to be a given fact that the earth was once a molten mass; neither would the result of the next general election seem to be given now. Both would seem to be inferential. The co-existence then of past, present, and future would seem to be inferred. From what? From experience. In our experience, a phrase of words or musical notes is, or appears to be, given together: we are aware of the whole phrase, or of the phrase as a whole, and of the several words or notes which compose it. The component words or notes are successive, so that if, or whilst, the second of them is present, the first is past, and the third is future, or yet to come. But, nevertheless, all three are present in the organic whole, in the phrase which alone has meaning, and which must be there in its entirety to be understood, or, for that matter, to be analysed into its constituent and successive words or notes. Indeed, even a word must be given, must be present to the mind *before* it can be analysed into its constituent phonetic elements; and so a phrase must be there, and its parts co-existent, before its constituent parts can be pronounced successive, or judged to be co-existent even. It is true that our "time-grasp" is limited to six or ten seconds; and that for us the past, present, and future only co-exist

within that limit. But we have only to imagine a mind whose time-grasp is not subject to limitation, and then everything will be enclosed within its grasp. As Professor Royce puts it (*The World and the Individual*, II, p. 145), in answer to the question, "how then for God shall this difference of past and future be transcended, and all be seen at once? I reply, in precisely the same sense all the notes of the melody except this note are not *when* this note sounds, but are either *no longer* or *not yet*. Yet you may know a series of these notes at once. Now precisely so God knows the whole time-sequence of the world at once. The difference is merely one of span." And Professor Sidgwick (*Dialogue on Time and Common Sense: Mind*, October, 1894) seems to have held much the same view: he says, "I follow these theologians in conceiving the past and future as simultaneously present in knowledge to the Divine Mind: but I am forced to conceive this presence of all the known to the Infinite Knower as perpetual, if I would avoid conceiving it at a point of time."

In Professor Royce's argument we start from experience; the basis which he takes for his argument is the "Specious Present," and the difference between the human and the Divine mind "is merely one of span." The Specious Present is *now*; and it contains, say, three notes, each of which in turn is also *now*; so that, if we confine our attention to the Specious Present, there is a *now* within the *now*, as the present hour is within the present day. On the other hand if we look outside the Specious Present, or the phrase of words or notes, we find that it is preceded and succeeded by a *before* and *after*. Expand the phrase *ad infinitum*; and, if the infinite phrase is *now*, it is in time, and carries with it a *not now*, preceding and succeeding it. If the Specious Present was specious to start with, then expanding it, even *ad infinitum*, will not make it the less specious; the difference between the expanded and the unexpanded forms of it is, we have been assured by Professor Royce, "merely one of span." If so, then the expanded, like

the unexpanded, form is in time. If, on the other hand, the Specious Present of the Infinite Knower is not to be conceived "at a point of time," if it is not in time, it is no *now*, *i.e.*, it is not preceded by a *no longer* or followed by a *not yet*. But if it is not in time, it would be better not to talk of it as "present," for the word inevitably suggests time. Indeed, it is only so far as it suggests time—erroneously from this point of view—only so far as this "specious" present is supposed to be "now," that it is susceptible of time-distinctions, and can be divided into the *no longer* and the *not yet*. If the Specious Present (of *any* mind) is not in time, it is no *now*; nor is any part of it. If it is not temporal to start with, subdivision will not make it temporal. If the simple phrase of words or notes is not *now*, neither can any one of them be *now*: there simply is no *now*, no present—and therefore no past and no future. But if there is no past, present, or future, they cannot co-exist. And, after all, quite apart from argument, it really does seem strange to maintain that the same moments of time are both successive and non-successive, *i.e.*, co-existent, or both simultaneous and not simultaneous. But, inasmuch as without argument it would seem at least as strange to deny as to maintain it; and, since Professor Royce does maintain it, let us consider this, the third of the views which were proposed in the opening paragraph of this paper for examination.

III. The third view is that both the succession and the simultaneity of past, present and future are not only given but are ultimate fact. Professor Royce takes up the position (p. 115) that as a fact of psychology, overlooked by metaphysicians, simultaneity and succession are "*present at once* to our consciousness"; and we have seen already that to assert either of them whilst denying the other results apparently in the necessity of denying both. If either is pronounced appearance, both must be. Let us avoid this, then, by pronouncing both to be real. It is in fact absurd, Professor Royce says, to speak "*as if the at once*" implied that there were for us no

temporal distinction between the first and the last beat or note" (p. 143); and it is equally absurd to speak as if it implied no such distinction for the Absolute: "the temporal sequences must be viewed as having in the real world, and for the Absolute, the same twofold character that our temporal experiences have for ourselves" (p. 140). "Present" or "now" has the same two-fold character for the Absolute as for us; the two-fold sense is the ultimate fact (p. 142). Expand the Specious Present, which for us is only a few seconds long, *ad infinitum*, and you get Eternity. You get Eternity, not Timelessness; for the Specious Present, whether it be that of the human or that of the Divine mind, is equally made up of past, present and future, of successive moments. It is, if I may so put it, a temporal (or a temporary) Eternity: "this same temporal world is, when regarded in its wholeness, an Eternal order" (p. 138).

Professor Royce's metaphysical theory of time would appear to be built upon a psychological basis, *i.e.*, upon the psychological theory of the "Specious Present," for he says at the beginning that the psychological theory has been "persistently ignored by many of the metaphysical interpreters of the temporal aspect of the universe" (p. 115), and at the end that "this two-fold view of your nature, as a temporal process and as an eternal system of fact, is precisely as valid and as obvious as the two-fold view of the melody or of the rhythm" (p. 147). So far then as the validity of the metaphysical theory depends upon the validity of the psychological theory, it is open to the same difficulties as those already urged against the "Specious Present." But, not to dwell upon or repeat those difficulties, we may ask, does the assumption that past, present and future are both co-existent and successive, take them out of time or does it not? If it does, then past, present and future, which are distinctions in time, are not in time: and that hardly sounds convincing. If it does not, then past, present and future are in time; and therefore are preceded by a past and followed

by a future. That seems to be the alternative favoured by Professor Royce when he says "there is in fact no last moment" (p. 136). But it seems also to be the alternative which he excludes when he says, "this same temporal world is, *when regarded in its wholeness*, an eternal order." To say "regarded in its wholeness" is to ask us to believe in a present which had no past and has no future, that is to say it requires us to believe in a present time which is not in time. Thus we relapse into the unconvincing position that past, present and future are not in time. This we are reluctant to do—it would be preferable to say that past, present and future, time-distinctions, are not real, and that time, with its distinctions, is mere appearance—and Professor Royce's statement that "there is *in fact* no last moment" must mean that there is in Reality no last moment, and that for the Absolute there is no last moment. Further, if there is in fact no last moment, then there is in fact no first moment; and therefore first and last cannot be comprised in a unity. Nor can they, if they do not exist, help with the aid of other moments (equally non-existent) to form a totality. And, if there is no unity or totality of the moments of time, it is vain to speak of regarding them in their wholeness; and consequently impossible to consider the temporal order as eternal, for that can only be done by regarding the moments of time in their wholeness. The unity or totality of the moments which make up the wholeness of time has precisely the same validity as the moments themselves; and there is "in fact no last moment," no first, and no intervening moments. And, if there are no moments of time, there is no possibility of maintaining that they are (or are not) both successive and co-existent.*

* A practical objection to Royce's argument is that it makes the Freedom of the Will impossible or unacceptable; the time-series is real, we see only a portion of it, and believe that as regards the Not-yet the Will is free. The Absolute sees the whole of the time-series, and sees the truth, viz., that the *not-yet* is just as fixed and unalterable as the

Thus far we have pictured time as a line, or (with Professor Ward) succession as a horizontal line and simultaneity as a vertical line. Thus time has been pictured, in effect, as movement in space, though, of course, no one has thought it to be really so. The question arises, whether if we renounce the picture, we shall shake off any misleading associations. Professor Bergson (*Essai sur les Données Immédiates de la Conscience*, pp. 60-85) argues that we shall. He starts from the position that two points of space may co-exist, but that two moments of time cannot co-exist; simultaneity is possible in space, impossible in time. We do imagine, in a way, illogically, before we think it out, that *before* and *after* exist together, but by *before* and *after* we obviously really mean two moments which do *not* exist together. This self-contradiction is due to the fact that we represent to ourselves, or rather misrepresent, the two *moments* of time as two *points* of space. The points in a line do co-exist; but the moments of time do not. The idea then that the moments of time do what they cannot do, viz., co-exist as points of space co-exist, is due simply to a false picture by which we desert what is given immediately in consciousness and misrepresent time as spread out in space, and confuse the moments of the one with the points of the other. Here then we have the contamination of time with space, from which we must free ourselves if we are to get time as it is given immediately in consciousness. Moments cannot be co-existent in time; points cannot succeed each other in space. Thus if points cannot succeed one another in space, neither is it in space that moments succeed one another; and we have

no-longer—both are there, before Him. The point of view of the Absolute is exactly that of the vertical line from which, in the "Specious Present," the recent past is seen: nothing is future to Him, for He looks back upon A B C D, all of which events are past to Him, though to A, or to any one at A, it appears that B C D are future. Hence, all freedom is gone, for A B C D are past; it is only from our point of view (A) that B C D appear future and not yet fixed and fact.

to form some idea of the succession of moments of time, uncontaminated by space. Such succession Professor Bergson calls "pure succession." It is "the form assumed by the succession of our conscious states when we abstain from separating a present state from the states preceding it" (p. 75). The states, then, must not be juxtaposed as though they were points in space: they must be organised, as the notes of a melody are organised in a tune. The notes, though they are successive, yet are parts of the air, much as the limbs of an organism though distinct are not separated from one another. The notes interpenetrate. It is only by abstraction that they can be separated. Unless and until they are separated, we have "succession without distinction," *i.e.*, "pure succession." No spatial metaphor is involved in this conception: it would be intelligible to a mind which knew not space. But we go and inject space into this "pure succession" and interpret or misinterpret it as a row of points, *i.e.*, a line in space. When and only when we have done this, we imagine we perceive *before* and *after* simultaneously—whereas we cannot believe really that successive moments are the same moment. In "pure succession" there is no reversibility because there is no order. And there is no order because there are no terms to be arranged in order: and there are no terms, because terms imply distinction: and "pure succession" has been defined to be "succession without distinction" (pp. 76 *ff.*).

Time, then, as it is immediately given in consciousness, is succession without distinction. This succession is defined to be purely temporal and absolutely non-spatial; it must, therefore, be the succession of past, present, and future, of the *now* and the *not now*. But it is succession without distinction. Without distinction of what? is it without distinction of the *now* and the *not now*, or with that distinction and without any other? On the one hand, past, present, and future, the *now* and the *not now* are purely time-distinctions: they are distinc-

tions which are, or may be, absolutely non-spatial. On that view, then, "pure succession" will mean not "succession without time-distinctions" but "succession without spatial distinctions." Subsequently, of course, past, present, and future may be compared to points in a line; but they must first be there in order to be compared. If the imagination is to find a resemblance, there must be something (*viz.*, the moments of time) in which it can, however unreasonably, fancy it detects a resemblance to points in space. In that case, then, past, present and future, the *now* and the *not now*, are given immediately in consciousness; and we are brought back to the question whether what is thus given can be accepted, or whether it is inherently self-contradictory. I think Professor Bergson would himself not wish us to accept it. In that case we are driven on to the other alternative, that "succession without distinction" means "succession without distinction of past, present and future." But if "pure succession" is succession without distinction of the *now* and the *not now*, in what sense is it succession at all? If past, present and future are not of the nature of time, what is that time in which they are known? Surely it is not time at all, but Timelessness? If so, I cannot see what is gained by speaking of "succession": it is a succession in which nothing succeeds. It is also, we may note, a succession which, according to Professor Bergson, "exists solely for the conscious observer," *i.e.*, does not take place in space. Outside me, that is to say in space, there is no time: true duration, the mutual interpenetration of the facts of consciousness, is peculiar to the subject (pp. 81, 82). Thus, as Mr. Bradley says (*Appearance and Reality*, p. 208), "for science reality at least tries to be timeless." And Professor Bergson argues that reality, as object, is timeless: but that reality, as subject, is marked by true duration, that is the mutual interpenetration of the facts of consciousness. But this mutual interpenetration, when we come to look at it, is just that

simultaneous presentation of the contents of the "Specious Present" which leads other writers than Professor Bergson to deny that succession can be ultimate fact. The succession of which we are aware is represented as a succession which is over when we view it, *i.e.*, which must be non-existent (and so a "Specious Present") before, or in order that we may view it—and how can we be aware of what is no longer there when we look for it? An inhabitant of Flat-land, condemned to move always in the same straight line, could never see that his track made a line: he would see it end on; and, to understand that it was a line, he would have to step off it and see it sideways. Thus, the very fact that we are aware of time proves that we are not in time. As Mr. Ritchie put it (*Philosophical Studies*), "to be aware of change of succession we must in some sense stand outside succession" (p. 91), that is to say, "the logical argument for the existence of a timeless self is the possibility of being aware of succession in time" (p. 189). Or, as Mr. Bradley, first of all, had put it, "change must be relative to a permanent" (p. 207). If so, then, as Mr. Ritchie said, "time cannot be an ultimate reality: for it has only a meaning in connection with change" (p. 90).

IV. Thus, we come, in the course of the procession which bears "Time to his tomb in Eternity," to the fourth view mentioned in the opening paragraph, *viz.*, that time-distinctions are indeed given but are appearance, and that Timelessness is the ultimate fact. The alternatives that we have thus far had before us have been: (1) That succession is the ultimate fact and that past, present and future cannot co-exist; (2) that their co-existence and mutual interpenetration is the ultimate fact, and that they are only subsequently spaced out and distinguished—in appearance; (3) that they are ultimately in fact, as they are given in appearance, at once successive and not successive—in reality they both do and do not co-exist.

As they are given in appearance, succession and simultaneity contradict each other. As an appearance, that is, time

contradicts itself. And if any one chooses to say that reality also contradicts itself, others are at liberty to remain unconvinced. If they remain so, if their faith is that reality does not contradict itself, then they must hold that Mr. Bradley sees the truth and says it: in time "we are forced to see the false appearance of a timeless reality" (p. 209).

VIII.—SYMPOSIUM—CAN LOGIC ABSTRACT FROM THE PSYCHOLOGICAL CONDITIONS OF THINKING ?

By F. C. S. SCHILLER, BERNARD BOSANQUET, and HASTINGS
RASHDALL.

1.—By F. C. S. SCHILLER.

It might seem at first sight that this question could be answered in three ways alone: by "*yes*," by "*no*," and by "*sometimes from some of them*." But this is certainly too sanguine. Philosophical questions are usually obscure because of the inveterate ambiguity of the terms in which they are put. And in this case it is probably essential to a profitable discussion that we should first agree on the meaning and function of Logic. In case, however, that this should prove to be impossible, it will at least be advantageous to explain the meaning in which I propose to use that term.

The meanings which may be attributed to "Logic," are numerous, and most logicians find it necessary, or at least convenient, to employ a good many of them. It is, however possible to fix the extreme limits of the variation towards one or the other of which a consistent view of logic must tend. The first of these conceives "Logic" as concerned with actual thinking, or even more ambitiously, as a systematic evaluation of real knowing. It does not, as such, object to talk about "ideals of thought," but it insists that these ideals must be evolved from and kept in contact with the actual facts of thinking, and considers that apart from these they are void of meaning and lose all value. At the opposite extreme to this conception of Logic there lies a treatment which makes Logic a sort of calculus of imaginaries, as formal and as arbitrary as algebra.

and not requiring to be essentially connected with any human function of cognition.

Of these two conceptions of Logic, I shall very decidedly prefer the former. I shall assume, that is, that to be a real science and not a mode of intellectual trifling, Logic must deal with actual thinking, and that its norms, whatever they are, must not be disconnected from the actual cognitive procedure of observable human minds.

Assuming this, it seems that an affirmative answer to our question is simply inconceivable. For all actual thinking is psychologically conditioned throughout, and Logic has no business to ignore the fact. At any rate, the *onus* lies on those who assert that this fact is logically irrelevant. To me the relevance of some of these psychological conditions is so overwhelmingly evident that I cannot conceive what meaning the word "thought" can convey, if abstraction is really and rigidly made from (1) interest, (2) purpose, (3) emotion, and (4) satisfaction.

(1) I can nowhere discover anything deserving of the name of thought which is not actuated by psychological interest. To affirm this, moreover, seems merely a truism. It is merely to deny that thinking is a mechanical process like, *e.g.*, gravitation. It is to assert that the processes during which the course of consciousness comes nearest to being a purposeless flux of mental images are most remote from cognition. It is to deny that thinking proceeds without a motive and without an aim, and to assert that in proportion as interest grows more disciplined and concentrated thought becomes more vigorous and more definitely purposive.

(2) Thinking therefore must be conceived as essentially purposive, and as the more consciously so, the more efficient it grows. Whenever Logic therefore seeks to represent the actual nature of thinking, it can never treat of "the meaning" of propositions in the abstract. It must note that the meaning depends on the use, and the use on the user's purpose. Now

this purpose is primarily a question of psychical fact, which admits of being psychologically determined, and which no theory can safely ignore. If we attribute to logical rules a sort of inherent validity, a sort of discarnate existence apart from their application to cases of actual thinking, we reduce them to phantoms as futile as they are unintelligible.

(3) Emotion accompanies actual cognition as a shadow does light. Even so unexciting an operation as counting has an emotional tone. The effect of this emotional tone seems to be various, and it need not be denied that in some people and in some forms it may have a hurtful effect on the value of the cognitive results. But this must be shown, and cannot be assumed, in any given case. And its alleged hurtfulness is no reason for denying the existence of this emotional bias, except to those who are very far gone in that application of "Christian Science" to philosophy which declares all evil to be "appearance."

(4) If a feeling of satisfaction did not occur in cognitive processes the attainment of truth would not be felt to have value. In point of fact such satisfactions supervene on every step in reasoning. Without them, logical "necessity," "cogency," and "insight" would become meaningless words.

It seems clear, therefore, that without some psychological conditions, viz., those which have been mentioned, thinking disappears, and with it, presumably, Logic.* Some, at least, of the psychological conditions cannot be dispensed with.

It would have been needless to labour this point at such length if it had not been denied, and that by no less a personage than Mr. F. H. Bradley. Like so many of Mr. Bradley's gems, it occurs in a footnote,† which I make no apology for quoting.

* I rather suspect, however, that some symbolic logicians would regard thinking, *i.e.*, judging and inferring, as so inherently psychological as to be extra-logical.

† *Mind*, N.S., 51, XIII, 309.

"If in the end there is to be no such thing as independent thought," he says, "thought that is, which in its actual exercise *takes no account of the psychological situation* ;* I am myself in the end led inevitably to scepticism. The doctrine that every judgment *essentially depends on the entire psychological state*, of the individual, and derives from this its falsehood or truth is, I presume, usually taken to amount to complete scepticism."

We learn from this surprising passage that it is complete scepticism to take complete account of the facts in a cognitive procedure, and that if we will not deliberately falsify them, we lapse into scepticism. But I must confess that Mr. Bradley's menaces do not cow me. I can see no shadow of a reason why for logical purposes such falsification should be necessary. And even if it were, so far from deterring us from scepticism, I can conceive nothing that should incline us more irresistibly towards it.

But perhaps the terrible consequence of admitting the facts is not that we should fall into scepticism ourselves, but that we should impel Mr. Bradley towards it, and so expose him to all the rude remarks he has himself at various times made about sceptics. This would be a situation which I for one should contemplate without dismay. For in common with many other philosophers of various schools,† I have long suspected that only a very fine line of his own drawing separates Mr. Bradley from a scepticism to which both his heart and the core of his doctrine inclined. When, therefore, I am told that a simple request to recognise the facts drives him across the line, I am disposed to wonder only that so light an impetus should serve as a pretext for avowing what might well have been confessed before.

At all events Mr. Bradley's difficulty is of his own manufacture. Just before declaring that to take account of

* *Italics mine.*

† Notably Mr. Haldan.

psychology was death to logic, he had "agreed" that there was "no such existing thing as pure thought." *I.e.*, presumably no thinking free from psychological contamination. Admitting this, all should have been plain sailing. "Pure" thought being psychologically a false abstraction, its troublesome fiction need no longer encumber the logical account of actual thinking. But this, apparently, would be sheer surrender to pragmatism, and so Mr. Bradley prefers to be "led inevitably to scepticism." He insists, therefore, that there must be "independent" thought. The meaning of this postulate is not explained. But presumably thought has to be "*independent*" of the psychical conditions.* But of these he had just "agreed" no existing thought could be independent. And so the contradiction is completed which was to lead Mr. Bradley to avow his scepticism. That this contradiction is not accidental, but inherent in the intellectualist conception of Logic, we may venture to infer also from a very similar disaster which overtakes Mr. Bradley's most prominent disciple, Professor A. E. Taylor. In an article on "Truth and Practice" in the *Philosophical Review* for May, 1905, he begins (p. 267) by

* I may of course have failed to apprehend what Mr. Bradley here means by "independent." For the term is one of those most unscrupulously juggled with. When pluralism has to be demolished by a word, we hear much of the iniquity of the "independence" its reals claim, but when it is a question of vindicating a "useless" philosophy it appears that every well-conducted "theoretic" truth preserves a virtuous "independence." Similarly we are told by "realists" that in the act of knowing the object of knowledge is quite "independent" of the knower's act. It is clear that in neither of these cases can "independent" mean "not connected with." And yet if it means less than this the alleged "independence" of the pluralist's reals cannot yield an *a priori* refutation of pluralism. Now I am quite willing to agree to any consistent convention about the use of any term, or even, if necessary, to give up its use altogether. But it should at least be made clear what it is taken to mean, and I cannot but think that if the present vagueness and ambiguity of "independence" were curbed, either the argument about the "independence" of thought or that about the impossibility of "independent" reals would have to disappear from the armoury of our absolutists.

denouncing "the modern error of regarding Logic as somehow concerned with the subjective processes of cognition," and wishing to "purge it at the outset of psychological accretions," and holding that the whole "notion of an individual thinking mind is absolutely irrelevant to the explanation of what we mean by truth." He thereby arrives at the singular conclusion that pragmatism is "quite irrelevant to Logic" (p. 286).

And yet, before the end of the same article, he is overtaken by as complete a Nemesis as the most vindictive pragmatist could have desired. The "truth," which (p. 273) had scorned all dependence on human minds and rested its authority on its relation to "an ideal or universal consciousness, an impersonal *Beatusstsein überhaupt*," has after all to be introduced into an actual knower's mind. And then it turns out (p. 287) that "what I as an individual actually accept as true *depends on** what propositions have for me the *special feeling** of obligatoriness," and "the efficient cause of my acceptance of a belief as true is thus a form of emotion." Professor Taylor explains indeed that the case is peculiar, that it is "a very specific form of emotion," but not how even the most miraculous constitution could exempt it from psychological treatment. If then this feeling of logical obligation or necessity is essential to every act of human cognition, what becomes of the independence of Logic and the boasted "purging away of psychological accretions"? In at least one point the connection between Logic and Psychology is vital and cannot be dis severed.

I will take it therefore, that, on the showing of intellectualist logicians themselves, a complete denial of the logical relevance of the psychological aspect of cognitive process is impossible. Indeed, in their practice this is so far recognised that their accounts are open rather to the criticism that in them logical and psychological considerations alternate in

* Italics mine.

inextricable confusion. But this only strengthens my case for the contention that Logic must *explicitly* take account of the psychological conditions of actual thinking and knowing, so far at least as in their absence its subject matter would disappear. I shall contend therefore that without them there is no such thing as actual thinking (and much less knowing), and that Logic becomes a science of the non-existent and impossible; that just in so far as a logical reasoning tries to abstract from these actual conditions, it increases the risk of *de facto* failure, so that the more "purely" "logical" it becomes the more likely is it to be ineffective and to be condemned as unintelligible; that strictly therefore *all* the psychological conditions have logical relevance, though no doubt it may often be impracticable to evaluate their full complexity, and so to attain more than a very moderate precision in the "logical" analysis of an actual argument. This last point perhaps only asserts that the logician as such is never the final judge of the value of an argument.

(1) I have already mentioned one large group of psychological conditions which are involved in all actual thinking. Purpose, interest, desire, emotion, satisfaction, are more essential to thinking than steam is to a steam-engine. •

(2) The most fundamental conceptions of Logic, like "necessity," "certainty," "self-evidence," "truth," are primarily psychological facts. They are inseparably accompanied by specific psychological feelings. What is called their "strictly logical" sense is *continuous with* their psychological senses, and whenever this connection is really broken off, its meaning simply disappears. We have observed Professor Taylor's failure to abstract from the psychological feeling of "necessity," but may perhaps indulge in a further illustration.

Let us take therefore the conception of "certainty." The most anti-psychological of logicians could readily be forced to admit that all certainty in its actual occurrence was accompanied by a psychological feeling of certainty in various

degrees of intensity. He would appeal, however, to the distinction of "logical" and "psychological" certainty. Psychological certainty, we commonly say, is subjective and exists for individuals; logical certainty is objective and imposed on intelligence as such. Again, psychological certainty may set in long before logical proof is complete, often long before it ought, and conversely our psychological stupidity may rebel against mathematically demonstrated truths. From these current distinctions the logician is apt to infer that psychological and logical certainty have really nothing to do with each other and ought not to be confused. But if this be true, why are they both called by the same name? Surely, if logicians wished to keep them apart and could afford to do so, they could label them differently. That they have not done so is a strong presumption that it is impracticable.

Indeed the truth would seem to be, (a) that if the *feeling* of certainty is eliminated the word becomes unmeaning, and (b) that "logical" is quite continuous with psychological certainty. The notion of "logical" certainty arises from the extension of potential beyond actual purpose in thinking. We actually stop at the point at which we psychologically are satisfied and willing to accept a claim to truth as good, but we can sometimes conceive ulterior purposes which would require further confirmation and other minds that would be satisfied less easily. This engenders the ideal of a complete "logical" proof transcending that which is good enough for us, and capable of compelling the assent of all intelligences. But even if it could be attained, its certainty would still be psychological, as is our capacity to project the ideal. Both are dependent on the actual powers of individual minds. Thus for the moment mathematical demonstration seems to satisfy the logical ideal of intellectualist logicians, and is praised as absolutely certain. But that they think it so is merely psychological fact. For the reason simply is that so far they do not seem to have psychologically conceived the thought

of varying the postulates on which such demonstration rests. If they had recognised the hypothetical basis of mathematical certainty, they could conceive something more "certain."

(3) The fundamental logical operations, like conceiving, discriminating, identifying, judging, inferring, all have psychological aspects, and could not come about by "pure" thought. I have suggested elsewhere* that logical identity is always a postulate. It should be stated as that "*what I will shall mean the same, is (so far) the same.*" And by "the same" I do not mean *indistinguishable*, (though this too is a psychological criterion) as Mr. Bradley does in what he considers "the indisputable basis of all reasoning," the axiom that "*what seems the same is the same,*" which he himself calls "a monstrous assumption."† Logical identity emphatically does not rest on an easy acquiescence in appearances or psychological carelessness about noticing differences. It is a conscious act of purposive thinking, performed *in spite of observed differences*. "The same" means that for our purposes these differences may be ignored and the two terms treated alike.

The principle therefore is not mere psychological fact, carrying no logical consequences. Nor certainly is it a mere tautology, "A is A." It is ultimately one of the devices we have hit upon for dealing with our experience. As such it may be supposed to have passed through an experimental stage as a mere postulate, and even now a certain risk remains inherent in its use. That there shall be identity we have good grounds for insisting, but our claim that any A is A may often be frustrated. For, of course, the belief that identities are to be found, however well grounded in general it may be, in no wise guarantees the validity of any particular identity we may choose to "recognize." That therefore every attempted identification should come true, would be the experience only of an omni-

* *Personal Identity*, pp. 94-104.

† *Principles of Logic*, p. 264.

potent being, whose volitions the course of events could never contravene. Only to such a being (if such can be conceived) would it be self-evidently, invariably, and "necessarily" true that "A is A"; in our human thinking the identities we select may prove to be mistaken. But on the whole the principle is valuable enough for us to ascribe our failures not to its inapplicability to our world, but to our own stupidity in selecting the "wrong" identities.

My limits forbid further illustrations, but I will select one more case, because it has been most disputed, viz., that of reasoning openly inspired by desire, *i.e.*, of a conclusion affirmed because we should like it to be true. Take the familiar argument: *The world is bad, therefore there must be a better.* It all rests on the desire for good, and the postulate of perfection. Now if postulation is as such invalid, and desire a mere obstacle to truth, it clearly follows that this argument is hopelessly illogical; which is accordingly what intellectualist logicians have everywhere maintained.* A bad world is logically evidence *against*, not *for*, the existence of a better.

Now against such abstract and *a priori* notions of what is good reasoning, I would lay it down that good reasoning is that which leads us right and enables us to discover what we are willing to acclaim as truth. And so tested the desire-inspired reasoning may clearly often be the better. It may prompt to more active inquiry, to keener observation, to more persevering experiment. The logician who declares *de non apparentibus et non existentibus eadem est ratio*, who declines to look for what he wants but does not see, who does not seek to penetrate beyond the veil of appearances, is, frankly, an ass. He frustrates his avowed purpose, the discovery of truth, by debarring himself

* *Qua* human they have, of course, not infrequently relapsed into the postulatory way of reasoning. Thus it is a favourite inference from the fact that all the parts of the world are imperfect, that the whole must be perfect. But if in this case it is legitimate to argue to the ideal from the defects of the actual, why not in others?

from whatever truth lies beneath the surface. His self-approbation, therefore, of the heroic self-sacrifice of his volitional preferences to "objective truth" which he "feels himself bound" to commit, is simply silly. What right indeed has he even to "feel bound"? For does not the phrase betray the emotional origin also of *his* attitude to truth? He accomplishes the sacrifice of "personal preference" to "objective truth" by dint of an emotional desire to mortify himself (or others), the satisfaction of which appears to him as a good. How then is he other or better than the voluntarist who makes bold to postulate, and verifies his anticipations?

Moreover, if we supply the missing premiss in the contention of the intellectualist, we find that it must take a form something like this, that it is *wrong* to anticipate nature, to go beyond what you can see, wicked to try whether the apparent "facts" cannot be moulded or remoulded into conformity with our desires. He must say "it is *wrong*." For he cannot say "it is impossible." For it is constantly done, and with the happiest effects.

If now we ask, *Why wrong?* we force the intellectualist to reveal the full measure of his prejudice. To defend his assumption he must do one of two things: (1) He may fall back upon his own feeling of the æsthetical or ethical impropriety of the voluntarist's procedure. But if so, his objection ceases to be purely logical. It may be declared to be only his idiosyncrasy, and be met by the retort—"but it does not seem improper to me. I do not, will not, and cannot worship disagreeable fact and unwelcome truth as you do. I do not, can not, and will not call a universe good which does not satisfy my desires, and I feel strongly that it *ought* to do so. Whether it does, or can be made to do so, I do not know as yet; it is one of the chief things I am staying in the universe to find out. If (a) it does, or can, then my desires are to be regarded as a sound, logical indication of the nature of reality and a valid method of penetrating to its core. If (b) it does

not, I may have, no doubt, to admit unwelcome truths and unpalatable facts. But I shall do so provisionally, and with a clear intention of abolishing them as soon and as far as I am able. If (c) it sometimes does, and sometimes not, why then I am entitled, nay bound, to try *both* methods. I have a right both to treat my wishes as clues to reality, and to subordinate them on occasion to facts which are too strong for me. And I observe that (whether you approve or blame) this is what, in fact, men have always done."

(2) If the intellectualist tries to find something more objective than his feeling of the wrongness of the voluntarist's procedure, what resource has he? Must he not appeal to the consequences of the two methods? Must he not try to show that the consequences of submission are always, or mostly, good those of postulation, always, or mostly, bad? But can he show this? Notoriously he cannot. And in either case has he not used the pragmatic test of logical value?

It is vain, therefore, to seek an escape from the conclusion that actual thinking is pervaded and conditioned through and through by psychological processes, and that Logic gains nothing, and loses all vitality and interest, all touch with reality, by trying to ignore them. To emphasize this is not, of course, to deny that for logical purposes some psychological conditions may sometimes be irrelevant. Thus in using concepts it is generally possible to abstract from the particular nature of the psychological imagery. The reason is that identity of meaning overpowers diversity of imagery; if this were otherwise, the use of concepts would be impossible. Again an error, say of counting, may be psychologically a very complex fact: it may nevertheless be logically a very simple error. By my counting 2 and 3 as 6, there may hang a lengthy tale; but for the logician it may be enough to say that the result ought to have been 5. It should be observed, however, even here, that the logical description of this process as an "error" involves an appeal to psychology; the error could not be recognised as such but for my capacity

to correct it, or at least to admit the validity of processes which enable others to correct it. If I were psychologically incapable of counting $2+3$ as other than 6, I could not recognise my "error," a "common" arithmetic would disappear, and there would remain no way of deciding which process was counting and which miscounting, but the experience of the respective consequences, and the test of survival.

When, however, the logician thus abstracts from the concrete facts of reasoning, he should do so with a consciousness of the nature and dangers of his procedure. He should feel that he may have left out what is essential, that he may have failed to notice the actual meaning of the thought he examined, and have substituted for it some wholly different imagination of his own. The proposition which he solemnly writes down an error or a fallacy may not have been a prosaic affirmation at all ; it may have been poetical hyperbole, or an hypothesis, a jest or a sarcasm, a trap, or a lie. He will, therefore, get a very little way into the analysis of actual thinking if he declines to recognise that in its actual use the same form of words may serve all these purposes, and cannot be treated logically until he has found out what its actual meaning is. A lie, I presume, is a proposition which claims truth like any other. But the claim is for export only ; the liar himself knows it to be "false," and has rejected the claim, even though he has persuaded all the world. I do not see how "the meaning" of such a proposition can be represented as single and simple, or indeed how its logical status can even be discussed without going into these facts. Does it not follow that logicians have no right to their habit of speaking of "the meaning" of a proposition as if it were a logical fixture ? *The actual* meaning is always a psychological fact, which in the case of an ambiguity intended, implied, or understood, may be many. The "logical" meaning is potential ; it is at best the *average* meaning with which the proposition is most commonly used. It is only more or less probable, therefore, as the interpretation of an

actual judgment. And to build a system of apodictic doctrine on foundations such as these is to build a house of cards.

I would conclude, therefore, what I fear must seem a very sketchy paper, by drawing the final inference that the logician must become a psychologist as well, and drop the notion of a "pure" and "independent" logic. He must conceive his business strictly as the evaluation of actual human thinking, and dismiss as unscientific presumption the wild-goose chase of an "absolute thought," and as illusory trifling the construction of symbolic systems which cannot be applied. His "rules" and "principles" will be as empirical in their use as in their origin, and will afford a modest guidance which actual thinkers will not despise and will find serviceable enough if they are intelligent enough to use them properly.

2.—By BERNARD BOSANQUET.

LOGIC, I suppose I may say, is the science which considers the nature of thought as manifested in the endeavour to apprehend truth. If it is objected by the Pragmatist that this is no differentia, I should be content to let the sentence run "as manifested in a fully self-consistent form."

We are asked the question, Can logic abstract from the Psychological conditions of thinking?

I will begin by answering the question, because the answer will explain in general the relation—as I see it—of "thinking" to its "psychological conditions." But then I shall have to point out that the question seems to have no direct bearing on the passage with reference to which it has been raised, and that this is really dealing with something different. I take it, then, that logic is able to abstract from the psychological conditions of thinking if and in so far as the thought which logic investigates has a nature of its own and does not take its nature from these conditions. This would be so, for example, if the conditions in question were the common form of emotion, and

imported no peculiar element into that conation which takes the shape of thinking in pursuit of truth. It would still be so, even supposing the conditions—interest, purpose, and the rest—to exhibit a peculiar character when they belong to the thinking which logic investigates, if it were the case that that character was already adequately investigated within the bounds of logic proper, leaving nothing to be ascertained by a further scrutiny of these phenomena as purely psychical disturbances.

Now, if we consider the first movement, as it were, of interest (taking interest as typical of the rest) which starts a train of thinking in the pursuit of truth (or of thinking which endeavours after full consistency), it must fall, I suppose, under the former of these cases. If we consider the more methodised interest of a reflective mind, engaged in a scientific inquiry and welcoming the specific logical procedures which lie before it, we must refer such an interest, surely, to the latter case. But I cannot see any conceivable case in which interest, or, say, emotion, can introduce into a train of thinking in pursuit of truth, a procedure which—demanding logical scrutiny—yet belongs to the interest and not to the thinking. If it introduces discontinuity or substitutes one issue for another in the train of thought, logic has nothing to scrutinise—unless the second case is treated as an *ignoratio elenchi*: if it introduces definite error, logic is here on its own ground, and knows what it has to analyse. The case of a suggestion which should fall within and contribute to the true line of argument, settles itself; such a suggestion belongs *ex hypothesi* to the train of thinking which logic considers.

I conclude, then, in the first instance, that logic can take care of itself. It can deal logically with any interest which embodies itself in a continuous train of thinking in pursuit of truth, and also with an interest which interferes with such a train otherwise than by mere interruption—or as a case on the boundary line, by a substitution of foreign issues. It can and must abstract from all forms of interest which are

extraneous to and interrupt the definite continuity of a train of thinking in pursuit of truth (or "endeavouring after full consistency"). Such forms of interest may relatively be termed psychological, *i.e.*, *merely* psychological, as contrasted with logical conditions of thinking. Logic, as the science which takes account of thinking in the pursuit of truth, must abstract from any condition of thinking which is in this sense merely psychological. What influences the train of thinking proper must appear in the form of judgment or reasoning however fallacious, and at this point must necessarily become the object of logical criticism.

This, I said, is my conclusion in the first instance. I should prefer to restate it in a form which will more completely explain and justify the relative distinction between logical and psychological interest, and avoid any appearance of arbitrariness.

I suppose that at least all conscious process is in a sense psychological process, and its conditions are in a sense psychological conditions, under which or through which the mind arrives at results of one kind or another. Now as I see the matter, the fundamental nature of this process—a nature which we might roughly describe as "continuity"—is one with the principle which when fully explicit takes the form of thinking in pursuit of truth or in pursuit of full consistency. (This form of thought is present, I should contend, in the higher phases of "practice.") Psychological process, in a word, when it differs from the process which is the object-matter of logic, differs by being inarticulate, circuitous, fragmentary. It is the logical process broken up and disguised: or rather, the logical process is the psychological process in its explicit and self-consistent form. To do violence to a simile of Plato, the Glaucon which is the mind owes its misshapeness to being made up of myriad imperfect growths of its own substance according to its own law, but stunted, arrested, distorted, in all possible ways. I do not mean that all arrested growths—the everyday conations which find a speedy and single termination

—are misshapen or diseased; but I mean that their early arrest though natural and necessary *ad hoc* is the main feature that produces the distinction between them and the fuller developments of the mind's nature. Now these fuller developments themselves—the wider growths of theory and practice—are never, I should imagine, found typically perfect in actual psychological process. I do not suppose that a sustained argument of any great compass is ever thought through by an actual mind without interruption or irrelevance. It is enough if continuity of content reappears and maintains itself throughout and within the psychological detail and the momentary distraction. It is clear therefore to me that the relation of thinking in the pursuit of truth to common psychological conditions is not one of abstract to concrete but of concrete to abstract. Strictly speaking then, when logic abstracts, it abstracts from an abstraction—the abstraction which speaks of psychological conditions of thinking, as though something isolable, shaping the course of thought from without. The psychological conditions which do not amount to true logical interest are simply, I take it, interests which are either prevented by conflict from working out their conation as a systematic whole, or are incapable of doing so from the nature of their original content. In the latter case the end of the conation is predetermined and needs but little development of context as a means to its realization. In thinking which pursues truth or full consistency—which of course may be subservient to practice in the larger sense, as when a minister announces that he has to think out what can be done for the Army—the object of the conation is to construct an ideal whole of a certain type: no point can be predetermined at which the conation is to stop. It is then on the whole the interests in predetermined ends from which logic must abstract: or, as I prefer to say, looking at psychological process as a whole, it recognises their partial nature, and the obscurity in which they involve the principles of mental continuity and advance.

Therefore it abstracts from the abstraction which would give them the name of psychological conditions of thinking *par excellence*, and dismisses them as trivial or as obstructive beside the more fully developed systematic conations, in which the nature of mind finds room to display itself articulately.

No difficulty arising from the relation between developed theory and developed practice can be exploited in favour of conceptions which suggest the dependence of truth on pure psychological conditions as such. The ultimate distinction between theory and practice is, indeed, none too easy; it is analogous to that between observation and experiment; between a result unveiled by changes we have made, and a result infected and qualified throughout by changes of our making. But these distinctions only arise at a point far beyond the elementary misunderstandings which are now before us. For the pursuit of goodness and the interest in beauty raise just the same problem as the pursuit of truth. It is as essential to them as to thinking in pursuit of truth not to be dependent on the mere psychological situation, on "the entire psychological state of the individual." Neither goodness nor beauty are conceivable as determined by mere psychological conditions; as if good were to be determined by the total actual want and beauty by the total actual feeling. The mind has its fundamental nature, which leads it, in different activities, to strive for harmony with the whole. But in the actual momentary mind this nature, as we have seen, conflicts with its own outgrowths, and maintains itself among them only through its self-assertion in the completer forms of interest, which on the whole predominate, and sustain the mind as a system.

I have now answered the question whether logic can abstract from the psychological conditions of thinking; and my answer is in short that it not only can, but must; it must abstract from these—if I may invent a barbarism—by concretizing them; by showing what they are as imperfect efforts of

mind to assert its own nature, and how the mind leaves them behind, and thrusts them aside, in its complete working. Any psychological conditions which are more than this become *ipso facto* logical conditions and fall within the analysis of logical process.

I now turn to the criticism of an alleged denial. Something has been denied; but what? The sentence which seems intended to indicate what has been denied runs thus: "It seems clear, therefore, that without some psychological conditions, viz., those which have been mentioned, thinking disappears, and with it, presumably, logic. Some, at least, of the psychological conditions cannot be dispensed with." The critic's argument, I admit, has been partly, though very slightly, directed to establish the logical relevance of the psychological conditions; but here in the conclusion we have relevance and existence inextricably mixed. It is only fair to place beside this extravagant suggestion as to what has been denied—as if it had been denied that need and desire are necessary to thinking—a somewhat full quotation from the incriminated article.*

"But I shall doubtless be told that the intelligence springs from and depends upon need and desire. There is no understanding, it will be urged, and no truth, except where there is an interest; and since interest and want must be admitted to be practical, we have here a clear proof that all in the end is subordinate to practice. To myself, however, this proof adduced by the Logic of Pragmatism seems hardly to require any serious discussion. To me it seems obvious that if some function belongs to our nature, there will be a need and desire which correspond to that function. Hence, if the free use of the intellect is really one aspect of our being, we shall in consequence have a need and desire for that use. And how this can prove that no interest is in the end intellectual I

* Mr. F. H. Bradley, in *Mind*, 51, p. 323.

wholly fail to perceive." "And you might as well come to me and offer to argue that I cannot want to look at a star, because my vision and my want are always terrestrial. And you might as well demonstrate to me that plainly I can love nothing beyond me, because my love after all must be a piece of myself."

But stress is laid more particularly on the demand that there shall be thought which "in its actual exercise takes no account of the psychological situation," and on the proposition "the doctrine that every judgment essentially depends on the entire psychological state of the individual, and derives from this its falsehood or truth, is usually taken to amount to complete scepticism."

Such views, we are told, involve a claim to falsify the facts in a cognitive procedure, the facts being the total psychological state of an individual mind in the moment of judging, and the procedure being the judgment passed in a determinate inquiry into truth.

The point, I think, is a simple one. Logical theory, the general account of consistent thinking, may fairly be challenged to explain its attitude towards psychological process in general, and towards the influences under which such process is carried on. Logic is a cognitive procedure whose object-matter, indeed, is consistent thinking, but which must be prepared to defend its boundaries by going on occasion somewhat beyond them, as is the case more or less with every science. In general, therefore, I should not gravely object to saying that the psychological situation, so far as it can be made an object of thought, comes under the cognitive procedure of logic, negatively, at least, *i.e.*, with a view to showing what sort of thing in it is relevant, and what sort of thing is not. I have given an example of such explanation, as I understand it, in the earlier part of this paper.

But a determinate train of thought is in a wholly different position; and this is why our discussion as to the relation of

logic and psychological conditions has only a general bearing—the bearing of a general theory on a specific 'case'—on the present question. Logic, in fact, as the theory of the mind as knowing, has to explain why a specific scientific procedure can *not* depend on the entire psychological situation. A determinate train of thought—an inquiry started by a definite discrepancy or positive suggestion within a certain range of experience—is made what it is by the limitation of its object-matter. Its object-matter, so far as it is a cognitive procedure, is not the mind as knowing, but a certain range of questions, opinions, perceptions, which it has, no doubt, to develop, but to develop in their own continuity of content wherever the argument may lead. To make the truth or falsehood of a phase in such a conation depend on the entire psychological state of the individual is simply to murder the argument. The universal, the continuity of content, the *veritas probandi*, is the nature of mind having so far found itself in a certain content and become explicit, and so working itself out according to its law in the completest unity and concreteness. The unity, that is, the continuity, of the logical process, the identity of content throughout, is, as I understand the matter, the only clue by which we get from data to conclusion or, what is the same thing, introduce consistency into experience. Now the mind of the individual at any moment is not such a unity; it is a Glaucus, the net want or response of which is no true totality, but the balance of influences from myriads of heterogeneous growths. To substitute its momentary want or response as a whole—this, it must be remembered, is the point—for its determinate ordering of experience in some one province where it is at its best, is to cut off the "pathway to reality" and ignore all phases and levels of self-assertion in the spirit of man.

I have said that the same principle holds with morality and æsthetic as with truth. It could not be better illustrated than by the passage where Kant discriminates æsthetic pleasure

in an object from interest in its existence. If the question is whether the thing is beautiful, we are not asked to say whether we or any one in the world cares a straw for the existence of the thing, or even could possibly care for it, but only how we judge it in mere contemplation (perception or reflection).* The whole passage is to the point. We may also recall Aristotle's distinction between the pleasure proper to an activity and the pleasures that interfere with it.

Thus the critic has applied to determinate trains of thinking what could only be true, at the outside, of logic and the psychology of cognition.† The total psychological situation cannot conceivably be an object, say, to an inquiry into the connection between wages and out-relief, as a cognitive procedure. The inquiry will go where the argument—the universal, or continuous nature of the subject—may lead it. "The thing itself will give the clue," but if it departs from that path the nerve of the inference is broken, and the nexus between mind and reality so far ceases to exist.

If I have made myself clear so far it will not be necessary to deal at length with the rest of the argument before us. The root of the whole matter is indeed obvious, but I take it to be especially made distinct in the sentence, "Must he not try to show that the consequences of submission are always or mostly good, those of postulation always or mostly bad?" The language echoes the reference to Protagoras in the Theatetus, and I presume that the echo is intentional. It is a confusion of Logic and Ethics—and there can be no ground for excepting Aesthetic—under the common heading of conative process: a refusal to recognise the common nature which takes these modes of self-transcendence beyond the *de facto* aspect of psychical change as determined by felt

* R. iv, 47.

† These, again, as determined procedures, would leave outside them other influences in the mind, which they would be unable to unite as a homogeneous context with themselves.

want, not to speak of the problem of distinguishing them from one another. The word satisfaction is used as a master-key; but it opens only the outer gate. Serviceable as indicating that cognition is a form of practice, it becomes mischievous when it suggests that no more than this can be said of our endeavour after the true, the good, and the beautiful.

If I am asked *what* more is to be said, as for example by way of determining the distinctive character of the conation which aims at truth, my answer is simply a reference to the science of Logic. I am convinced that the wilful omission to enter upon the specific ground of logical science, typified by the reiteration of the barren appeal, "But is not truth a satisfaction?" is as responsible for the Protagorean confusion to-day, as it was in the time of Socrates. All the minor puzzles about "pure" thought in relation to "actual" thought, and postulation in its bearing upon success, fall into their places when this matter of principle is understood. The absurdity is illustrated by representing scientific postulation as if it was demanding a £5 note from a man of undecided mind, who may give it you simply because of your importunity, or again may not. Those for whom logic exists do not believe that it is importunity which prevails with the universe: to them the condition of victory appears to be adaptation; and adaptation means conformity,* and conformity means following the method of experience, which is investigated by the science of the mind as knowing. We are plainly told, indeed, that importunity does not always prevail: "I subordinate my wishes on occasion to facts which are too strong for me." Here again the truth implied is commonplace and obvious: the note of pragmatism lies in the suggestion of a tussle with the universe by brute force, instead of a continuity in experience of a definable type. Or again, the rough popular treatment of the argument *a contingentia mundi*, is thoroughly character-

* "Natura non nisi parendo vincitur."

istic. We need only compare it with a careful statement of the nexus as given in Nettleship's biography of Green,* or with a criticism of the self-consistency of certain desires, as suggested in Appearance and Reality,† to see the difference between a crude reference to the desire for good and an appreciation of the method by which experience develops.

I may say in conclusion that I do not accept, and I do not much believe that anyone does accept, the name Intellectualist. The application of it in the history of philosophy, as for example, by Gomperz to Socrates,‡ appears to me destructive of all sound interpretation; and in modern controversy it can hardly be other than an appeal to the prejudices of the man in the street, which it should be the task of philosophy to "loosen by criticism." It is fatal to the whole endeavour to work out an ideal of experience beyond discursive thinking, and also beyond blind data of feeling, and its application to the author of Principles of Logic, and Appearance and Reality, seems as bad a blunder in nomenclature as could well be conceived.

3.—By H. RASHDALL.

MR. SCHILLER has rightly insisted upon the importance of context in the interpretation of language and of thought. The meaning of a proposition cannot be gathered from that proposition alone, taken in isolation from all other contents of the mind whose judgement that proposition expresses. But I do not think he has himself observed that salutary principle in the present controversy. He has not asked himself, so far as I can see, for what purpose anyone supposes it possible for Logic to abstract from the psychological conditions of thinking. And the answer to be given to the main question seems to me to

* Page xc.

† Ed. 2, p. 509, and footnote.

‡ Gomperz, *Gr. Denker*, II, p. 53.

depend entirely upon the purpose for which it is supposed that the attempt can be made. He has shown that it is impossible for actual thought to exist in entire separation from psychological processes. He has shown that thought itself is a psychological process, which I suppose nobody ever denied. He has shown again that thought can only exist in a mind. Even this has hardly, I suppose, been explicitly denied, though undoubtedly it has not always been remembered by Philosophers of a certain school; but (whatever may be said of others) Mr. Bradley is the last thinker against whom such a charge can plausibly be made. Mr. Schiller has shown further that thinking is only one among many psychological processes or aspects of consciousness; that consequently there is no such thing as bare, naked thought, not accompanied by feeling or volition; and that our thinking is actually affected by the nature of the willing and the feeling that go on, side by side, with the thinking in a given individual mind. Here again we have an elaborate demonstration of a truth which has never been explicitly denied, though it has, doubtless, not been sufficiently remembered by those "Intellectualists" who have practically expelled feeling and willing out of the Universe; but among those thinkers Mr. Bradley is certainly not to be included. The great value of Mr. Bradley's metaphysic, as it seems to me, is precisely to have asserted the place in Reality of feeling and of willing against Hegel, or (if so it be) a particular interpretation of Hegel which is certainly not unknown in this country. If and in so far as anybody has asserted that we can abstract from the psychological conditions of thinking in the sense of thinking without willing and feeling, Mr. Schiller has certainly, as it seems to me, proved his point. But what I imagine to be meant by the assertion that in Logic we can make such an abstraction, is that we can for a particular purpose not attend to these psychological conditions, but can attend, or aim with more or less success, at attending exclusively to one aspect of a consciousness which in point of fact has other

aspects. The particular aspect of the contents of consciousness which we attend to as Logicians is the truth or falsehood of the judgements and inferences contained in that consciousness. It may be said that we do in a sense make abstraction even of the consciousness itself—that is to say, we examine the truth or falsity of the judgements, not indeed without remembering that judgements imply a mind, but without attending to the question whose mind it is that judges.

Mr. Schiller frequently writes as though “abstracting” meant effecting an actual separation—as though it were supposed that we could abolish feeling or emotion by not attending to them and so could think without feeling or even without having a mind to think with. To deny that we can, in the sense and for the purpose which I have explained, abstract from the psychological conditions of thinking would, if the denial is to be really thought out, amount to the assertion that we cannot judge of the truth or falsity of a proposition at all; for certainly the truth or falsehood of a judgement is an abstraction, when we take it apart from the other aspects of the judgement. And the other aspects of the judgement, of which we make abstraction, are, or certainly include, the psychological aspects. The Psychologist, so long as he really confines himself to the psychological point of view, (which no Psychologist can ever really do for long together) knows nothing of the truth or falsity of judgements. It may no doubt be said that “the most fundamental conceptions of Logic, like ‘necessity,’ ‘certainty,’ ‘self-evidence,’ ‘truth,’ are primarily psychological facts”: at all events they are psychological facts; I am not quite sure that I understand the “primarily.” We do, indeed, usually attribute these qualities not to minds, but to judgements: but it is quite true that we could not do this unless there were minds which could make the judgements and recognise these qualities in them: these epithets do undoubtedly imply certain ways in which certain judgements impress the mind. But in whatever sense they are

psychological facts, error and falsity are also psychological facts. And how do we know the difference between truth and falsehood? Surely Psychology, *qua* Psychology, cannot tell us. When we attempt to pronounce a judgement true, and another judgement, which (if it is actually made by some mind or other) is no less a psychological fact, we are adopting not the psychological but the logical attitude. We are precisely making abstraction of the psychological conditions of thought in the only sense in which any one has seriously contended that such a feat is possible.

Does Mr. Schiller deny that it is possible to judge whether propositions are true or false? I am bound to say that such a denial is what at bottom it seems to me that Pragmatism means. If it does, it is not difficult to show that it is suicidal. Even were it true that propositions are true or false in so far as they help us to satisfy our desires or achieve our purposes, the Pragmatist cannot express what he means without saying that it satisfies our desires or helps to the attainments of our ends *to think them true*. It is the thinking them to be true, not the assertions themselves, which does sometimes help us in this way. It is thereby acknowledged that there is such a thing as thinking an assertion to be true, and that consequently the truth of a judgement is not the same thing as satisfying desire. Even if it were true that we have "a right to treat our wishes as a clue to reality," that would not show that to wish a thing is the same thing as to judge it to be reality or to hold good of reality. Even if the Pragmatist were inclined to go the length of asserting that "to be true" means only to serve our ends, even so he makes the assertion that it is true that what serves our ends is true. If "to be true" meant merely "to serve our ends," this would be equivalent to saying "what serves our ends, serves our ends." And even such an identical proposition is a judgement, and implies that a judgement is something different from a feeling or a volition. To recognise this difference, and to examine

what flows from it, is precisely what is meant by a Logic which endeavours to abstract from the psychological conditions of thinking.

Whatever may be the case with Mr. Schiller, it is clear to me that Professor James does really go to this length of refusing to recognise any difference between true and false judgements. Practically he holds that a judgement is simply a feeling. He is in fact a Sensationalist, and the only difference between his position and Hume's is that Hume knew that his system led to pure Scepticism about Morality, about Science, and about Religion, though he admitted that his doubts, at least as regards Science, left him the moment he left his study: while Professor James apparently believes that he can reconcile pure Sensationalism not only with Science but with Religion and Morality.

I am bound to say that some passages quoted by Mr. Schiller from Professor Taylor seem to me to make in the same direction. When he says that "what I as an individual actually accept as true depends on what propositions have for me the special feeling of obligatoriness," he seems to go near to a confusion of judgement with feeling. After all "obligatoriness" means what I cannot but think true, and feeling is here, as it seems to me, wrongly used as the equivalent of "judge." In this particular passage (though not in his general position) Professor Taylor, by exaggerating the extent of the possible abstraction of thinking from its psychological conditions, has almost arrived at much the same results as Mr. Schiller arrives at by denying that any such abstraction is possible at all. It has driven him into at least appearing to identify a judgement with a feeling, and has been led to the mistake by the same irrelevant consideration which has so powerfully impressed Mr. Schiller, *i.e.*, the undeniable fact that thinking is accompanied by certain kinds of feeling or emotion. He has pushed the contrast between our actual thinking and the ideal of pure, abstract thought to the point of

refusing to admit that our actual thinking is thought at all. In both Professor Taylor and Professor James this position has led to the denial of any absolute morality. Professor Taylor's Absolute ignores and despises (from the intellectual point of view) the distinction between right and wrong, because it is merely a mode of human feeling; while Professor James, who is, as it were, his own Absolute, regards as right everything which happens to satisfy his desires. Once more, with less consciousness of the fact, Professor James finds himself in the same position as Hume. But Pragmatism would not be proved to be true, even if it could be shown that Professor Taylor was a Pragmatist too.

How far Professor James' position is shared by Mr. Schiller, I am not quite sure. But that Mr. Schiller does not see any particular difference between feeling and judging may be inferred from his talking about a man's "own feeling of the æsthetical or ethical propriety of the voluntarist's procedure." Much of the plausibility of Mr. Schiller's argument turns simply upon the device of using the word "feel," when other people say "think." When I talk about feeling that a procedure is ethically proper, I am using "feel" as a popular equivalent for "think." A feeling with a "that" after it is not a mere feeling, but a judgement.

I admit that on sensationalistic premisses there can be no abstraction from the psychological conditions of thinking: for on such premisses there can be no abstracting, and consequently no thought, at all; for all thought implies abstraction. If to judge means to have an idea, all ideas must be equally true. But I am unwilling to suppose that Mr. Schiller can have been led by his loyalty to Professor James into the same quagmire of sensationalistic Metaphysic: and consequently I look about for some less extravagant interpretation of his thesis. Does it mean that Psychology itself judges whether propositions are true or false? If so, all I can only say that Mr. Schiller chooses to attribute to Psychology, or a branch of Psychology,

the functions that other people attribute to Logic. It would almost seem that this is what Mr. Schiller deliberately intends to do, when he says that in pronouncing it necessary to say that 2 and 2 make 5 "the logical description of this process as an 'error' involves an appeal to Psychology; the error could not be recognised as such but for my capacity to correct it, or at least to admit the validity of processes which enable others to correct it." But surely when we pronounce that a judgement actually made is an error we are thinking, if there be such a thing as thinking in the world. Mr. Schiller seems to be here using the barren truism that thinking is a psychological process to suggest that it is *only* a psychological process; which must mean that there is no real difference between thinking and any other psychological process, and consequently no distinction between true thinking and false. When we judge that a proposition is false, we are putting ourselves into the logical, not the psychological attitude—unless Mr. Schiller is simply calling Logic Psychology. That is exactly what is meant, and all that is meant by saying that we can abstract from the psychological conditions of thinking. As mere psychological fact, the judgement that 2 and 2 makes 5 does not differ from the judgement 2 and 2 make 4; when we pronounce that there is a difference, we do so as Logicians, not as Psychologists. When Psychology leaves the question of thinking as an occurrence and concentrates itself upon the question of validity, it becomes what other people call Logic: and there could not be such a Science, unless we could neglect everything or an actual thinking which is irrelevant to the assertion of its truth or falsehood.

Or does Mr. Schiller mean that attention to psychological thinking may be useful as an instrument in the discovery of truth and the detection of error. This on the whole is, I believe, all that Mr. Schiller really thinks, though this will not justify his attack on the "Intellectualist Logicians." To a very limited extent a true meaning could be found for such an assertion. Upon a very optimistic view of the world the fact that a belief

was in accordance with my wishes might be a reason for thinking it true, but then the fact that the world is of such a character would need independent proof. It would be more in accordance with experience to say that the fact that a judgement has been suggested by inclination, by habit, by education or the like may be a reason for suspecting it to be untrue: but still that does not prove its untruth. It would be insane Scepticism to doubt the truth of Euclid because it has to be taught, though much so-called scientific scepticism about Morality rests upon this naive assumption. If we do doubt its truth, we can only satisfy our doubts by thinking harder, and making a more deliberate effort to abstract from everything about Euclid except the validity of his arguments—the high reputation which he enjoys or enjoyed till yesterday, the respect which I may feel for the character of my mathematical master and the like. I don't see that any knowledge of psychological facts whatever will enable me to perform this process better. The question of the purpose for which I study Euclid is irrelevant to the question of its truth or falsity. The fact that I study it to avoid punishment or to pass an examination does not show that it is false: the fact that I study it from pure love of truth does not show that it is true. Equally irrelevant is the question whether it is right to study Euclid or not. To call the superior cogency of the arguments for the fifth proposition of Euclid's first book, as compared with the arguments which may be urged against them, a psychological fact, is simply to play havoc with universally received distinctions of language, which, after all, express distinctions of thought. I cannot say that the arguments are good without (1) abstracting from the psychological context in which the judgement comes to me, and (2) introducing a reference to a reality beyond the judgement which goes beyond the purely psychological point of view.

To sum up the whole matter, Mr. Schiller's thesis may mean simply that we can only discover truth or falsehood by the use of our own minds, which, besides thinking, do also feel

and will: that is a fact which nobody denies. Or he may mean that the fact that we can only distinguish between truth and falsehood by the use of our own minds is a reason for asserting that truth is only what commends itself to my feelings or accomplishes my volitions; and that consequently the fact that I think a thing is no reason for thinking that it really is so. And that is Scepticism. And Scepticism is as fatal to Morality as it is to Science. I recognise that Mr. Schiller and the Pragmatists mean to be champions of Morality. They want to be on the side of the Angels: I fear they are really on the other side altogether. Professor James has explicitly asserted that the good means "that which satisfies my desires." So has Professor Alexander, who knows that his ethical system is substantially Hume's. If so, my moral judgements possess as little validity as other judgements. Moral obligation disappears as well as Truth. I cannot make out whether Mr. Schiller wishes to follow Professor James and Hume in this matter.

I have so far said nothing about Professor Bosanquet. I have done so because on the whole, if I understand him rightly, I agree with him. But I fear no one can so far abstract from the psychological conditions of thinking (though we all aim at it) as to express himself in exactly the same way as anyone else. My mode of expression has been different from Professor Bosanquet's, and can hardly hope he would approve of all that I have said; but in the main, so far as I understand him, I think my view of the matter comes to much the same thing as his. If it is not so, I hope Professor Bosanquet will set me right.

4.—COMMENTS ON PROFESSOR BOSANQUET'S PAPER.

By F. C. S. Schiller.

I cannot honestly say that Professor Bosanquet's paper, rich as it is in interest and instruction in other ways, has

answered my questions or discussed the problems I have sought to raise, viz., as to how the conception of a Logic independent of psychological matter of fact can be reached. For he has not consented to cast back his mind to the point at which my problem arises, to the primitive chaos of immediate experience that is before the sciences have been discriminated and set in orderly relations to each other, when as yet all things are together as undifferentiated "fact" and the spirit of man still broods tentatively over the confusion and has not bethought him to create the sciences that tame the chaos.

But this was doubtless my fault. I did not make it sufficiently plain that I wanted to begin at the very beginning, and to call in question the original delimitation of the sciences.

If I had succeeded in explaining this, Professor Bosanquet would no doubt have seen that he could not meet my objections by putting himself at the standpoint of an already constituted science of Logic. He would have seen that the question was as to how that standpoint was to be attained, and whether, as currently conceived, it was valid. My problem was as to how, starting from actual reasoning, we could effect the discrimination in it between what is logically valuable and what is merely psychological. I wanted to know how logical values could be disentangled from the whole mass of material which psychology essays to describe.

Professor Bosanquet, on the other hand, appears to have unconsciously presumed that Logic possessed a standpoint, fixed, definite, and subject to no doubt, whence it could serenely analyse our actual reasonings. He replies therefore from the lofty heights of "those for whom Logic exists"—*already*, he refers me "simply to the science of Logic," he charges me with "wilful omission to enter upon the specific ground of logical science," in short, he takes for granted the very disentangling and discriminating which I was trying to examine.

Now this procedure is all very well for those who are quite fixed in their faith that Logic exists, and exists in the way they

believe, and is no longer a problem, and I do not for a moment dispute that from his point of view Professor Bosanquet's remarks are natural and just. But he will readily understand that it hardly meets the demands of those who are still, unfortunately, groping for firm ground, who doubt whether "the specific ground of logical science" has been scientifically arrived at, and scruple to cut Logic quite loose from its roots in psychology. And as it is among the latter that I must humbly rank myself, it would have been kinder of Professor Bosanquet to have told me how he fixed the boundaries of Logic with *a priori* certainty, rather than to accuse me of trespassing on its holy ground.

It is one of the unfortunate consequences of this misunderstanding as to what the problem under discussion was, that Professor Bosanquet's reply becomes almost wholly irrelevant from my point of view, as I will now proceed to show.

(1) "Psychological process," he tells us, "differs from that which is the object matter of Logic by being inarticulate, circuitous, fragmentary. It is the logical process broken up and disguised," a "Glaucus" whose divine original is, however, "never found typically perfect in actual psychological process." And so logical process, far from being an abstraction from psychological process as I had thought, is really more concrete, "the mere psychological conditions" are mere rubbish.

Now all this is plausible, and for aught I care may even be true, once Professor Bosanquet's standpoint is conceded. But it is not even relevant *until then*. Nor is it anything I am bound to concede. For I did not in the least mean by the "psychological conditions of actual thinking," the "mere" or "pure" conditions Professor Bosanquet has substituted for them, the worthless residuum which may be flung aside when Logic has evaluated them. I meant the most concrete thing imaginable, the psychical process in its all-inclusive activity. I called it "psychological process" merely to indicate that it

was what psychology seems to aim at describing in its integrity and as it occurs.

Professor Bosanquet's "merely psychological process" is certainly an abstraction, as such vastly inferior to his "logical process." But it is not psychical process at all to my thinking. It is the actual psychical process with its values extracted and extirpated, whereas my "psychological process" is the foundation in fact on which Professor Bosanquet erects his arbitrary ideal of a perfect "logical process." This latter he confesses to be an ideal, but what I want to know is why that ideal should be framed, and how it is to be defended against an objector who condemns it as a travesty of actual cognition which inevitably leads to a frustration of the human desire for knowledge.

(2) Professor Bosanquet admits that his conception of Logic may fairly be challenged to explain its attitude towards psychological process in general, and then goes on to defend the passage I had quoted from Mr. Bradley by an interpretation which, for the credit of the human reason, I am willing to believe may be psychologically correct, but of which I can find no hint in the original text.

But though Professor Bosanquet permits us to inquire into the general relation between Logic and Psychology, he entirely demurs to introducing such considerations in to any "determinate train of thinking." To do this is "simply to murder the argument."

This assertion does not, I fear, convince me, and it seems a pity that the murderousness of this procedure is so perfunctorily illustrated. It seems moreover to have escaped Professor Bosanquet that I was raising the two questions together, the second being a logical consequence of the first. For if, generally speaking, logical process is organically connected with psychological process (as I conceive it), how can it be denied *a priori* that this connexion may

penetrate into and pervade the inmost fibre of every actual thought?

The burden of proof seems clearly to lie upon those who attempt such a denial.

Moreover even Professor Bosanquet's rather meagre illustration suggests this possibility. How can "the connexion between wages and outdoor relief" be inquired into as a cognitive procedure, without evaluating also the possible effects of political prejudices on the data dealt with, on the facts alleged, the analyses made, and the remedies suggested by the inquirers? Is it explicable that mankind should be divided into two great parties on every conceivable question, if the partisan feeling Professor Bosanquet thinks extralogical did not permeate the evidence from end to end, principles, "facts," inferences and all? Must we contend that free traders or protectionists are all illogical fools because their feelings naturally weight their intellectual scales?

Or more generally, if it is granted, as I understand Professor Bosanquet does grant, that the actual human mind is biased, and must always be so, how can it be logically irrelevant to recognize this bias? Will not its evaluation be the evaluation of a normal feature in human thought? And if so how can Logic shirk it?

I am sure, therefore, we should all be very grateful to Professor Bosanquet if he would explain how his independent Logic is arrived at, the more so as his published works do not define his attitude on this point. I presume it must be *a priori*, because if it were done empirically, it would be open to the objection that, *de facto*, the consequences of so conceiving Logic do not seem very satisfactory.

I will next consider Professor Bosanquet's protest against my classification of the current "idealist" Logic as intellectualistic. I am sorry that such a harmlessly descriptive term should be regarded as disparagement, and I am at a loss to

understand why any intellectualist should be ashamed of his creed. Though unable to accept it myself, I have always thought a complete intellectualism one of the most wonderful and superhuman achievements of the human mind. Complete and consistent intellectualism, however, is certainly a very distant ideal, and I have never attributed it to Mr. Bradley, who is plainly less intellectualistic than, *e.g.*, Hegel or Plato. My classification of him as an intellectualist was, however, relative to definite points which I stated, and to the differences which separate us. And so long as nobody denies that his doctrine is intellectualistic in some crucial respects and as compared with a more voluntaristic logic, I can see no impropriety in so denominating it. And it seems to me to be unworthy of philosophy to abandon a correct description simply because Professor Bosanquet is afraid that the man in the street does not like intellectualism.

I will conclude my remarks with a string of questions concerning points which Professor Bosanquet has left obscure in my mind.

(1) I cannot at all understand his definition of Logic, partly, perhaps, because it does not refer to mine, nor state how far he accepts or rejects it. But it seems very ambiguous. Does it conceive Logic as a normative science or not? If it does, then how can its norms disclaim connexion with the actual course of thought from which they are extracted? If it does not, then how can it help being essentially psychological, *i.e.*, an attempt to do over again, on no definite principle, the description of psychical process which psychology may be presumed to have already accomplished?

Again, what is meant by the reference to "truth"? Does it mean the formal claim made by all judgements, or its validation?

If it means the formal claim, then what assures us of its validity? If the validation, then will not the original claims fall into the province of psychology?

The reference to self-consistency indicates perhaps that "truth" is conceived as essentially a "claim"; but I cannot see that the study of a "self-consistent form of thought" is an obvious equivalent of the "endeavour to apprehend truth." But it is better to stop guessing at Professor Bosanquet's meaning as he can doubtless easily explain it.

(2) Does Professor Bosanquet conceive "adaptation" as wholly *passive*, and deny the possibility of our adapting our environment to our needs? If he does, has he not surrendered to naturalism? If he does not, why does he ignore the logical value of human activity as shown, *e.g.*, in postulation?

(3) What does he mean by "the rough popular treatment of the argument *a contingentia mundi*," with which he reproaches me?

(4) If he admits that need and desire are necessary to thinking, how can he limit their logical influence and dogmatize about their cognitive value, *a priori*?

(5) When he accuses me of confusing Logic and Ethics, is he referring to my recognition of Logic as a science of values? If not, what more or else does he mean?

(6) Before stigmatizing the doctrine that "truth is a satisfaction" as a "barren" one, had he ever examined its possibilities of fecundity? And if he has, how can he be sure that this truth will prove as "barren" under our care as under his? And if the establishment of this truth was such a barren victory, why has it been conceded to us so grudgingly and ungraciously? Why, to pursue another of Professor Bosanquet's metaphors, were we prohibited from so much as looking over the garden wall, if it was known all along that we were in possession of "the key to the outer door"? Even now, however, there is no just cause for alarm. I can assure Professor Bosanquet, that even when we have fought our way into the innermost sanctuary of the Temple of Life, we shall only cast out a few decrepit idols, and that no harm will come

to the True, the Good and the Beautiful. The danger to them comes from quite a different quarter, in which their union is not recognized.

(7) And lastly when he defines Logic as an endeavour, and cognition as a form of practice, and says that need and desire are necessary to thinking, does he at all consider these phrases to constitute a correction or modification or extension of the position he formerly held? And does he not consider them to use psychological terms?

5.—*Reply to Mr. Schiller's Comments by Bernard Bosanquet.*

There must be an end to rejoinders at some point; and I am not going to do more than shortly reiterate the main line of my argument. And this I only do because it appears to me not to be alluded to in the reply. The questions in that would I think all answer themselves from a consideration of what I have written, and it is not my business to answer them.

But I can attach these few remarks to one observation in the reply, viz., to the statement that I, and as I understand logicians in general, do not explain or justify our "independent" logic.

I shall not treat of my own works separately, in comments on this. The question of their merits is not one with the only important question, what attitude logic on the whole takes up on the point at issue. It is urged, I gather, that the science is arbitrary, and that it furnishes no answer to the question how logical values are to be disentangled from the whole mass of material which psychology essays to describe. This statement strikes me as quite extraordinarily false; and the making of it seems to betray the same complete inattentiveness which neglects the fact that the argument of my paper was precisely directed to this point.

My attempt in the paper—to begin with this—was just to point out that logical science is the recognition of a mode of

activity, which is one great division of the satisfaction aimed at by the psychological process, in a word, by the soul, so far as it comes to know what it wants: and though I have no great respect for an account of genesis (which I suppose is what is asked for, as we are commanded to begin before Science has been thought of, and yet to explain the distinctive nature of logic), yet no doubt delimitation may be thrown into the form of an account of genesis. I presume this is really what is suggested. I think it, as I say, extraordinarily false to assert that logic is defective in this matter of delimitation. The whole fabric of a logical system is an attempt to show how the distinctive interest in one form of harmony of the soul, the form of truth, takes shape and specialises itself as against or as beyond other psychological interests and habits. It is quite impossible to develop this at length. I have already pointed it out in principle and the detail would require volumes, but I will add a few hints.

Logic usually begins by selecting certain forms of language as appropriate to its needs, and the selection is more or less progressive. The imperative and optative moods and the interrogative sentence are dropped out at once, the historical tenses at a more advanced stage. I may say here that I do not call the Science of Logic normative: I call the object of the science self-normative; the object of logical science being the scientific activity of the mind. If the necessity of the self-normative development, which logic recognises and analyzes, can be impeached, it must surely be impeached in detail. You must argue the point whether the content of imperative and optative or of the question can be brought into one whole of truth with statements which directly qualify reality.

Then further, the relation of common psychological association to the universal connection of Science is elaborately worked out; this relation is the basis of Lotze's logic and plays a large part in Mr. Bradley's. It is pointed out how the psychological connections are imperfect attempts to do what the

ruling interest demands and what is more completely done by the judgement of logical connection, and generally the relation of psychological to logical necessity, mentioned in the first paper of this discussion, is a well known logical topic, and is discussed wherever a logician speaks of the test of truth, as in the controversy between Mill and Whewell with all its sequel. How far belief depends on practical attitude is again a familiar point of discussion, and I do not remember to have seen a refutation of the criticism which Mr. Bradley has passed upon Dr. Bain's doctrine. It is very much to the point of the present argument. The occasional subordination of truth to practice is recognised in the theory of working hypothesis; and the justification and limits of postulation, together with the value and limitations of desire as a source of postulates has certainly been treated by myself. My treatment is very likely unsuccessful; but it takes the liberty to exist. It is, no doubt, covered and rendered unimportant by something very different from it, with a few words upon which I will end these remarks.

Since Plato formulated the doctrine of the *ἀγαθόν*, with its intellectual and ethical degrees of adjustment and fulfilment, no fresh treatment of the authoritativeness of our desires or of the relation of the great self-expressions to the ordinary mind has, in principle, been necessary. If anyone wants to assert that there can be a desire which guarantees its own fulfilment, he is still bound to go for his type to Plato's desire of the *ἀγαθόν* and to accept or refute the conditions which Plato imposes on its realisation. This condition, in a word, is criticism, that is the adjustment of an element to a whole, both intellectually and volitionally. This is, for Plato, essential to fulfilment of the soul's desire, and if we conceive of ourselves as members of a whole, it seems impossible to deny its necessity. Absolutism and nullity seem alike contradictory if alleged of the member of a whole.

I should say, then, if you ask for a norm of any science, for its justification in what it regards and disregards, there is none

but the approach to individuality on the part of the science itself—its completeness and comprehensiveness. You cannot attack any science from without. It can only be judged by itself at a further stage. Therefore, I think it truer to speak of the mind, in Science or in the theory of Science, as dropping out abstract psychical processes and going forward on the path of concrete fulfilment or individuality. But I quite recognise, with Dr. Rashdall, that if we set this growing individuality against the confused condition of the momentary mind, the latter may in a sense be held the concrete—the *συγκεχυμένον*, the concrete of confusion—and the former may then be treated as an abstraction from it. In that sense, as he says, a judgement of truth abstracts from the psychological detail of moment, although the whole, by connection with which it is true, has a far higher degree of concreteness than the momentary mind itself. The fundamental point throughout is the essential connection of adjustment and fulfilment, whether in the intellectual qualification of reality, or in practical change.

6.—COMMENTS ON DR. RASHDALL'S PAPER.

By F. C. S. Schiller.

Turning next to our President's paper, I find myself in much smoother waters. That is, I have no difficulty in understanding what he means. And so it is much easier for me to remove what seem to me his misapprehensions. His difficulties with my thesis seem, however, to be, on the whole, different from Professor Bosanquet's. Both, indeed, decline to accept my conception of the relation of Logic to Psychology, and both have taken it for granted that the standpoint of Logic is clear and indisputable. But Dr. Rashdall has seen that the nature of Psychology also is involved, and has made his conception of it quite clear.

Unfortunately, that conception seems to me to be entirely arbitrary, gratuitous, and untenable. As now current in our

philosophy, it goes back to the distinction, which Mr. Bradley has so vigorously insisted on in the first chapter of his *Logic*, between the logical and the psychological idea, validity and existence. The distinction itself is a valuable one, if it is not exaggerated, and it is remembered that we cannot distinguish without connecting, and that it is the *connexion* between Logic and Psychology which is our problem. But as the point is stated in Mr. Bradley's *Logic*, many readers carry away the conviction that no psychological idea has validity and no logical idea has existence. And this, of course, is absurd, as Mr. Bradley himself came to see. You will find his self-correction in *Appearance and Reality*, p. 51.* Unfortunately, this has not been as widely noticed. And so we are still told that values lie beyond the province of Psychology. But for this dogma I can conceive no reason, earthly, celestial, or infernal.

If we conceive Psychology as the Science which aims at describing mental process as such, its own purpose will, of course, debar it from becoming normative, *i.e.*, from evaluating the values which may happen to occur in a psychical process. But this is not to say that it ignores them. It must, of course, recognise them, if in point of fact they occur, as obviously they do. Only it will treat them just as facts, and describe them, while leaving it to Logic to evaluate them, that is to utilise and harmonise the claims to be "true," which all judgments make, whether or not they are true.

The logician, therefore, as I conceive, takes over from Psychology the existence of his values and their description. His task is to evaluate them, *i.e.*, to determine the validity of the claims to truth which are actually made and have been described by Psychology as they actually occur. To shirk this duty seems to me to reduce Logic to an impotent formality.

* I cannot make out Professor Bosanquet's attitude towards this question from the footnote on p. 16 (Vol. II) of his *Logic*. On the face of it, it seems to deny that an intellectual activity is a psychical fact.

Logic and Psychology therefore have the same subject matter, but regard it with a different purpose. Cognitive values occur twice over, in Psychology as so many facts, in Logic as subjects for a critical evaluation. It is necessary to state, therefore, whether we are speaking of values as claims, or as validated after logical criticism. But I will not pursue this subject, as I have recently devoted an article in *Mind** to its elucidation.

The next misapprehension which I find in Dr. Rashdall's paper concerns the relations of Humism and Humanism. He tries to bring down three birds with one stone and argues that I must be a Humian because James is a sensationalist and a sensationalist must be a Humian. On a previous occasion this argument was further clinched by hurling the *Theatetus* at our heads. I believe, however, that all the logical and metaphysical difficulties of Platonism can be traced back to Plato's failure to understand Protagoras, and propose to show this fully in a forthcoming volume. Meanwhile, I can only briefly traverse all these allegations, and declare that, and why, there is nothing in them.

- (1) I am not a sensationalist, because
- (2) I am a voluntarist, and
- (3) Sensationalism (at least of Hume's type) is a form of intellectualism. Moreover
- (4) What I mean "voluntarism" above all to emphasize is the all-pervasive *activity* of conscious life, which
- (5) Modern Psychology has worked out in detail. Hence
- (6) A psychologist is not a Humian, even if he makes much of sensations. For
- (7) He conceives sensations differently, as products of active, selective functioning.
- (8) James, therefore, is not a sensationalist. Nay,

* N.S., No. 58.

- (9) He has refuted Hume in one of his two vulnerable spots, viz., his psychology, whereas the transcendentalist answer to Hume is a huge *ignoratio elenchi*, and, moreover, stands and falls with the correctness of Hume's psychology.
- (10) What is taken to be sensationalism in James is really his empiricism and immediatism. But these are just what lead us to insist so on the reality of values and activities, as immediately experienced. James makes this quite clear in his article on the *Experience of Activity*.*
- (11) On the other hand no one who has once agreed to Hume's demolition of the conception of activity can ever get it back.
- (12) This is why the transcendentalists have ultimately to deny the reality of human activity, and why
- (13) Their desperate attempt to conceive the Absolute's as the sole activity in a world composed of phantoms is a failure.

HAVING mentioned 13 points and the Absolute, I should stop for luck's sake, but there are two points in Dr. Rashdall's paper which I cannot pass over without a mild protest.

The first is his animadversions on Professor Taylor, who has now quite convinced me that he does not mean to be a Pragmatist.† Still, even where his writings are least successful, they evince a gallant attempt to see the real points at issue and to pierce through the mists of intellectualistic prejudice in which his early "Anglo-Hegelian" education has enfolded him. Moreover, on Dr. Rashdall's own showing, his difficulty is just the opposite to mine: what I cannot see is, how Logic can deal with absolute "thought"; what he cannot see is, how it can deal with human thought. It seems unfair also to single out his

* *Psych. Rev.*, January, 1905.

† Cf. my article in *Mind*, N.S., 59.

ethical views for denunciation. For surely he has only stated, lucidly and impressively, what has always been known to be the ultimate ethical consequence of absolutistic Monism. Of course, the Whole cannot be specifically moral and good so long as immorality and evil exist in the universe, even as appearances or illusions.

Next, it seems to me unfair to prejudice our discussion of the logical question by threatening all sorts of disasters to morality and knowledge as consequent upon coming to our conclusion about it. Dr. Rashdall knows that we repudiate his allegations and credits us with pursuing the same aims as he does; but ought not this to make him very reluctant to bring such charges without substantiating them in detail? In point of fact there is nothing in them:—

- (1) Scepticism has really much greater affinity to Absolutism than to Pragmatism, as the examples of Mr. Bradley and Mr. Joachim show.
- (2) Pragmatism is the only real antidote to Scepticism, as
- (3) Hume himself was acute enough to perceive. That he was content to leave his Pragmatism one-sided and restricted to Science merely shows that he had no wish similarly to save religion and philosophy. And
- (4) Dr. Rashdall's argument, I regret to say, appears to me to be in a way pragmatic, and that in the worst way. It is an appeal to consequences. But in his own words, Pragmatism would not be proved false even if it could be shown that he, too, was a Pragmatist. For the way in which the consequences are in this case appealed to, seems to me quite illegitimate. Before the ulterior consequences are called in *in terrorem*, the proximate consequences should be threshed out. And I have faith enough in truth to believe that its discovery in epistemology will not lead to its destruction in ethics.

In conclusion, one very remarkable fact about my thesis may be pointed out, viz., that *the more you contest it, the more you confirm it.*

If, that is to say, you do not agree with me and think that you are right and I am wrong, there will arise the conflict of convictions which is so normal in the philosophic world. We shall each of us be convinced that our own beliefs are absolutely right, true and logical, and that they ought to commend themselves to every rational mind, to intelligence as such—for we all naturally identify our beliefs with those of intelligence as such. Being thus convinced of the entire rationality of our own beliefs, we shall naturally be annoyed to find that other minds do not share them. We grasp, therefore, at the excuse that the others would agree with us if their minds could only be cleared of the obfuscations of psychological prejudice. Each of us, whatever his opinion, will think this, if he thinks his beliefs true, and if not, does he really believe them? A claim to absolute truth, therefore, is made on every side of every argument. But in point of fact this claim never is, nor can be, substantiated. Should not this shake our dogmatic confidence that one individual opinion alone, viz., our own, should attain to absolute truth unalloyed by psychological distortions? Why should each of us make an exception in his own favour?

Is it not simpler, therefore, and honester, to disallow this common claim, to drop this appeal to an unknowable ideal, to strike out this X in every one's contention? Let us frankly recognize that in all logical disputes we are dealing with human reasonings alone, and that in these the personal equations and psychological context of the parties to it can never really be abstracted from. The more we differ and the more confident we are that we are right the more manifest do we make this truth. And does not a "Logic" that tries to ignore these facts flee from earth to take refuge in some supercelestial paradise of fools?

IX.—SENSE-PRESENTATION AND THOUGHT.

By G. DAWES HICKS.

THE subject I am going to discuss is a psychological one, and as such I shall, in the main, treat it. But the relation of thought to sense perception has formed, since the time of Kant, the central theme of discussion in the field of theoretical philosophy generally, and in dealing with the more specifically psychological problem it is scarcely possible, even were it desirable, to lose sight of the wider issues involved. In point of fact, however, many of the hard and fast distinctions which formerly separated opposing systems of philosophical speculation break down when looked at in the light of results obtained from a genetic study of concrete psychical phenomena. Herbert Spencer evinced perhaps greater insight than he is sometimes credited with when he discerned in the doctrine of Evolution a mode of mediating between the extreme contentions of empiricism and rationalism, even though the precise lines of mediation he himself suggested may not have been happily chosen. In the present paper, for example, I shall be endeavouring to show that the activity of thought, in the psychological sense of the term, is to be traced back to simpler and more elementary processes of mind, and to that extent, at least, I shall be giving adhesion to what has always been a fundamental principle of empiricism. With Mr. Bradley I am convinced that "thought proper is a product" and that psychological science can trace its probable generation. But like him I am persuaded that such a position can be maintained only if we are prepared to allow that much more is involved in the simpler processes of mind than writers of the empirical school have generally been willing to recognise. And with that proviso, I believe the really valuable portions of

Kant's epistemological theory retain their significance. If we are justified in regarding one form of conscious experience as a product evolved from a lower form, then it must be fundamentally the same process that is at work in both, and whatever can be shown to be a necessary condition of the possibility of the former must be implied also in the latter.

Obviously, in endeavouring to trace the development of what is specifically called "thinking" from more rudimentary states of mind, we are compelled to frame some conception of the condition of things characteristic of the earlier stages of mental life. In our mature experience there is no act or process of consciousness from which elements of thought are wholly absent, or the nature of which is not to a large extent influenced and determined by the fact that the subject in question is a thinking or reflectively self-conscious individual. Consequently, sense perception as it takes place in the mature mind is a much more elaborate operation than sense perception can possibly be in the primitive consciousness. Even the apprehension of the simplest sense quality, although no doubt it preserves a certain continuity of character throughout the entire range of conscious experience, cannot be supposed to have remained unaffected by the evolution and growth of the mental life as a whole. This circumstance occasions probably the most serious obstacle the psychologist has to encounter in attempting to explain or to describe the facts of mind. So far as method of procedure is concerned, there is for him no option. He is compelled to start with an analysis of experience as it actually comes before him in his own mental life, and the tendency, almost insuperable, of taking what there seems indispensable as ultimate and fundamental may readily enough lead to misinterpretation and error. The course of evolution is clearly much more subtle and complicated in the field of mental phenomena than in that of biology: it is impossible to find in physical nature an exact parallel for the peculiar mode of transformation the simpler kinds of psychical process undergo in the gradual advance to self-consciousness.

In default of any direct information we can only pursue the more hazardous method of inference, and by reasoning backwards from the complex facts of our mature experience, as a basis of fairly assured knowledge, attempt to reconstruct in thought the constituents of the primitive mental life.

1. SENSE-PRESENTATION IN ITS RUDIMENTARY FORM.

Mr. Bradley's conjectural sketch of the earliest stage of soul-life has often been quoted. "In the beginning," he believes, "there is nothing beyond what is presented, what is and is felt, or is rather felt simply. There is no memory or imagination or hope or fear or thought or will, and no perception of difference or likeness." "There is nothing beyond presentation which has two sides, sensation and pleasure and pain."* Mr. Bradley is here attempting to describe the experience in question as a scientific psychologist would do if it were possible for him in some way to be a spectator of it. In one respect there is, I imagine, little ground for dissenting from his mode of statement. With a reservation that will appear immediately, the features he has excluded seem to me, at any rate, secondary and derivative, and therefore rightly regarded as factors of later growth. Difficulty begins when we proceed to inquire as to the nature of that which admittedly is present. I shall have something to say about the doctrine of sentience further on. Here, however, I would urge, at the outset, that if presentation is there at the start, then what is there is incorrectly described as "all one blur" within which differences may be contained but of which there is no recognition. Even the awareness of a "blurred whole" implies that such "blurred whole" is not absolutely devoid of any characterising mark. I can find no means of realising what a state of mind can be in which there is in some sense awareness, and yet awareness of nothing. It seems to

* *Mind*, xii, 1887, pp. 363 and 367.

me that the simplest, and most rudimentary, phase of consciousness conceivable must be described as at least recognition,—as indefinite, vague, and confused as you will—of a quality or content possessing to some infinitesimal extent a distinguishable character. And the difference between infinitesimal and none at all is here of first-rate importance, because there is involved in it the crucial point as to the fundamental nature of the attitude of “being aware.” The minimum which I have claimed as necessary for consciousness precludes the possibility of carrying back the mental life to a stage when it would consist entirely of what is simply “given” (even in Mr. Bradley’s sense of “that which is simply, and comes as it is”), without the exercise of any activity on the part of the subject. I am fully mindful of the woeful ambiguity of the phrase “exercise of activity on the part of the subject.” I am not committing the “barbarism” of supposing that the activity in question is an activity of which the subject itself is aware. Far from it. I gather that when Mr. Bradley speaks of psychical states as events or occurrences, he is himself assuming an ultimate mental agency of which they are modes or exemplifications.* For the subject a presentation may be simply what is presented and yet the hypothetical psychological spectator may mis-describe that presentation *even as it is for the subject*, if he leave out of account the fact that the presenting is not an external but an internal process, and fail to inquire into the conditions which render such internal process possible. Just as little in the form of a chaotic undifferentiated whole as in that of a succession of atomic sensations can what is presented be psychologically treated as so much datum supplied to the subject and in relation to which the latter may be viewed as in an attitude of simple passivity. However far back in the history of mind we go, apprehension of any sort necessarily implies some amount of mental construction, dependent no

* See, for instance, *Mind*, N.S. xii, 1903, p. 166.

doubt for its origination and continuance upon outer stimulation, but never itself to be reduced to mere reception of, or even reaction on, stimulation. If presentation, then, involves a mental act of presenting, the subject must necessarily be aware in and through such act of some distinguishable feature. For the act consists in presenting something, in being aware of something, even though that something be "one blurred whole."

To put the matter quite generally, it is precisely the peculiarity of mind, as contrasted with what we are accustomed to call phenomena of outer observation, that mental facts exhibit a unique double-sided aspect, sufficiently difficult to express with scientific exactitude, but neglect of which in any psychological treatment of mind cannot but lead to downright error and confusion. Apprehension, alike in its lowest and its highest forms, is invariably twofold in character: it implies (α) a process or occurrence, which takes place, an act, as we will call it, of apprehending, and (β) a more or less definite content of which the subject is aware in and through the act of apprehending. The distinction itself is, of course, sufficiently familiar; * certain considerations in connection with it need alone concern us here. In the first place, it is not a distinction which we in our mature experience have to wait for the psychologist to point out to us. It is a distinction with which all of us in ordinary everyday life are perfectly acquainted, however liable we may be to misinterpret it. No distinction seems to us more self-evident than that

* One of the earliest writers to emphasise its importance was Arnauld, in his exceedingly suggestive little work, *Des Vraies et des Faussees Idées*, published in 1683. In Chapter V, for instance, occurs the following passage:—"J'ai dit que je prenais pour la même chose la perception et l'idée. Il faut néanmoins remarquer que cette chose, quoique unique, a deux rapports, l'un à l'âme qu'elle modifie, l'autre à la chose aperçue, en tant qu'elle est objectivement dans l'âme; et que le mot de perception marque plus directement le premier rapport, et celui d'idée le dernier. Ainsi la perception d'un carré marque plus directement mon âme comme apercevant un carré: et l'idée d'un carré marque plus directement le carré, en tant qu'il est objectivement dans mon esprit."

between hearing and the sound heard, seeing and that which is seen, imagining and that which is imagined, thinking and that about which we think. But it would, I think, be a mistake to conclude that the distinction, *in this form*, is an invariable feature of conscious experience; it would be a mistake to suppose that, because psychologically apprehension always involves process and content, that therefore every apprehending subject must be capable of distinguishing its apprehending from that which it apprehends. The subject can only draw that distinction through the aid of a number of ideas and thoughts that lie completely beyond the scope of a primitive mental life. As such it can only make its appearance in conscious experience when through reflection the content presented has come to be definitely connected with the objective order of things. In fact, for the subject itself it is practically synonymous with the distinction between self and not-self, a distinction which we can hardly hesitate to admit lies beyond the range of the earlier stages of conscious experience. From the very beginning, then, process and content are undoubtedly there, and must be psychologically distinguished; the subject's own distinction between its act of apprehending and what it apprehends on the other hand is not there from the beginning, though the indispensable condition of its being afterwards attained is. In the second place, the distinction of process and content is not, psychologically considered, so it appears to me, at any stage a distinction of two separable facts. There is only one fact involved, the act, namely, of apprehending, which is in its nature the apprehending of a content.* In our mature experience, we readily enough come to regard the distinction as a distinction between two separate things. That we do so is due to the circumstance that in ordinary life we tend to identify the

* This consideration is repeatedly urged by Arnauld; immediately after the passage already quoted, for example, he proceeds to insist upon it.

content perceived with the real thing which, for the moment we will say, it indicates; we seldom stay to consider that there is any difference between the appearance and that which appears. Such tendency on our part in no way militates against the view that process and content, though distinguishable, are inseparable, that the one is not without the other.

The consequences which result from assuming that process and content are two independent facts are nowhere more clearly illustrated than in the writings of the Herbartian psychologists. Volkmann, for example, lays stress, as Herbart had done before him, upon the distinction between presentative activity and presentation. "The presentation," he says, "is related to the act of presenting as product to process, as the qualitative determination of that which is produced to the quantitative character of that which produces. The presentation (*Vorstellung*) is the *presentatum* (*das Vorgestellte*), i.e., that which the presentative act brings forward and holds firm. It follows from this," he admits, "that the notions of presentation and of presentative activity are correlative notions, and that ultimately it is impossible to think of a presentation without presentative activity or of a presentative activity without presentation."* But, he goes on, "since presenting is an activity and every activity may be inhibited by another opposed to it, it is as a matter of fact possible that the presenting of a presentation may be converted into a mere striving to present, into an activity which misses its effect. We should then have an act of presenting which for the time being produces nothing: we should thus have a presentation which is not actually presented. Anyone, for instance, may quite well have the presentation, Hannibal, without actually now presenting it. In order to originate a

* *Lehrbuch der Psychologie*, 1875, Bd. i, p. 168 *sqq.* As an instance of the baffling confusion attaching to the term *Vorstellung*, it is of interest to note that Brentano employs it with exactly the opposite meaning to that adopted in the above quotation. "I understand by *Vorstellung*," he writes, "not that which is presented, but the act of presenting" (*Psychologie vom empirischen Standpunkte*, p. 103).

presentation, the act of presenting is indispensable, but the presentation may continue, without the act of presenting continuing in its activity. Every presentation originates through an act of presenting, but the act of presenting continues, either as an actual presenting or as a mere striving to present." So soon as it is thus supposed that presentation and presentative activity may be altogether isolated, and exist in separation the one from the other, we lose all the help, it seems to me, that might otherwise be obtained for psychological analysis from the distinction itself. Presentations come then to be regarded as veritable entities, which act and react upon each other, and which in fact discharge all the functions we are accustomed to ascribe to actually existent things. It is true that Herbart himself does assert that presentations are not in themselves forces (*Kräfte*), but he contends that a number of presentations when in conjunction—and they always are in conjunction by reason of the underlying unity of the soul—become forces and resist or oppose one another.* They may conflict with one another, they may be fused together or be mechanically combined in groups or series, they may exert energy and withstand pressure. In short, the Herbartian psychologists were driven by the exigencies of their method of treatment to attribute a quasi-substantive mode of existence to these so called presentations.

2. CONTENT AND PROCESS.

With the Herbartian doctrine before us let us now draw by way of contrast what seem to be the legitimate consequences of the conception of apprehension as involving the distinguishable though inseparable aspects of content and process.

I consider, firstly, the content. The admission that process and content, understood in the sense explained at the commencement, are inseparable carries with it, I think, the further

* Herbart's *Werke* (Hartenstein), Bd. v, pp. 15 and 16.

admission that to presentations, in the sense of contents, the predicate of existence does not rightly attach. I am not going to dispute that a meaning may be found for the term "existence" in the light of which it would be sheer nonsense to deny existence of presentations. But I have no hesitation in asserting that in precisely that significance with which we are constantly employing the word in question, the above statement correctly represents the assumption on which the common opinion of mankind tacitly proceeds. Ordinary popular usage consistently distinguishes an existing thing from an imaginary thing. In the former case, it is not the presentation of the thing, but the thing in the external world that is taken to exist. The ordinary man, when once he is brought to the point of recognising a distinction between content and external things at all, no more regards his visual image of the friend actually beside him as an existent reality than he regards his visual image of a friend a hundred miles away as an existent reality. Or, using another illustration, it would be generally admitted that "the visual appearance of the full moon as seen from the earth's surface" is not an existent thing either in the sky or in the head of the observer. In other words, the content of an act of perception and the content of an act of imagination would be ordinarily recognised as standing, so far as existence is concerned, upon exactly the same level; the predicate of existence would be withheld from both. And the principle involved in this denial is not difficult to decipher. Ordinary reflection implicitly recognises that a presentation or content forms in itself no element in that system of interconnected facts or events which together make up what is usually described as "the real world," that, adopting Dr. Shadworth Hodgson's terminology, it is not a "real condition" in the realm of change and genesis. That implicit assurance of the ordinary consciousness seems to me to be philosophically justified. The apprehension of any specific quality involves, as we have seen, an

act or process, whether material, as Dr. Hodgson holds, or psychical as I hope to show reason for thinking. On the latter hypothesis, we have described what happens as an act of mind in and through which there is awareness of a relatively definite content, which content may be compared with the contents of other acts of mind. But this content ought not itself to be spoken of as a mental fact, as an existing constituent of consciousness; the mental fact, the constituent of consciousness as an existent, is the act of apprehending. Of the content what Herbart maintained of presentations generally is doubtless true,—it may be said to have a perpetual and unchanging mode of being. Nothing can alter it, simply because it is not something that can be operated upon or that itself can operate upon anything else. But just in this sense it neither was nor is a component part of the existing reality called the individual mind, and it is to mix up in hopeless fashion two totally heterogeneous lines of consideration to apply to process and content indiscriminately the same set of attributes.

It may perhaps be worth while to add that the view here taken of the nature of the content is by no means new. It is at least as old as Aristotle. Sense-perception, Aristotle explains in a well-known reference (*De An.* ii, 12) is the power of apprehending the form of sensible things without the matter of them, just as wax receives the impress of the seal without the iron or gold of which it is composed. The apprehended content, therefore, is not an existent concrete thing, a *τόδε τι*, but a *τοιονδί*, a qualitative determination; the *αἰσθητόν* as apprehended is, in Aristotelian phraseology, an *αἰσθητόν κατ' ἐνέργειαν* (*Ib.*, iii, 2). And here it is interesting to observe that it is just because sense-perception is of this character that, according to Aristotle, it has what is implicitly universal for its content, and the advance from it to the higher kinds of knowledge is possible. The Aristotelian contrast between what is apprehended by the

mind in the process of knowing and what belongs to existent facts in the external world reappears in numerous pairs of terms that belong to the rich vocabulary of scholastic philosophy. The scholastic distinctions between subjective (in the sense of *substantia*) and objective (in the sense of that which is involved in *obicere*, in the act namely of bringing before the mind), between existence and essence, between *esse reale* and *esse intentionale*, all refer with varying shades of significance, to the same fundamental consideration. The distinction is preserved in slightly different phraseology throughout the whole body of Cartesian literature. Descartes himself repeatedly sets over against one another the *realitas obiectiva* attaching to the *idea* of a thing and the *realitas actualis* or *formalis* attaching to the *thing* in its independence of the act of apprehension (*cide*, e.g., *Med.*, iii and v). Similarly Spinoza distinguishes the *essentia obiectiva* of a thing, *i.e.*, the nature of a thing as represented in an act of apprehension, or as content of an idea, from the *essentia formalis* of a thing, *i.e.*, its real or "formal" nature, as a mode in the system of *natura naturata* (*cide*, e.g., *De Intell. Emend.*, § 33). The distinction was lost sight of in subsequent philosophical discussion, mainly, I take it, in consequence of Locke's unfortunate use of the term "idea," his application of it indifferently either to mental process or to apprehended content, a confusion which perpetuated itself in the writings of those who followed him.

The distinction as it reappears in the works of Lotze and Mr. Bradley has, I venture to think, retained not a little of Locke's confusion, and thereby lost much of its original value. It comes before us there as the distinction between idea in the sense of psychical existence and idea in the sense of logical meaning or significance. Lotze, for example, starts by assuming an "unconscious psychical mechanism," capable of preparing given sensuous material for the supervening activity of thought, regarded as a special and unique faculty of the mind. The first

operation of thought is, he considers, to set in 'movement that process of the "objectification of the subjective," the ultimate outcome of which is the body of systematised knowledge. The operation itself consists in separating something previously unseparated, namely, the sensitive act from the sensible matter to which it refers, and, as a consequence, we present the latter to ourselves no longer as a state or event which we undergo, but as a content, which itself is what it is, and means what it means, whether we are conscious of it or not. In other words, mere impressions are converted into ideas. But, in order that this process of severance should take place, it is essential that the sensuous states or impressions should themselves be there, entering, by the very fact of their co-existence, into relations, and, in virtue of the grouping to which the psychical mechanism gives rise, forming felt combinations which may be described as sensuous images or pictures. In other words, the psychical state or event is itself, according to this view, what we have called a content: it is that which is apprehended prior to the act of judgment. Mr. Bradley's treatment of the subject does not, in regard to the particular point I am referring to, differ greatly from Lotze's. He, too, holds that the psychical event or existence is a mental image. "Neither outside my head, nor yet inside it," he writes, "can ideas have existence: for the idea is a content, which, being universal, is no phenomenon. The image in my head exists psychologically, and outside it the fact has particular existence, for they both are events. But the idea does not happen, and it cannot possess a place in the series."* The whole view on which the statement I have quoted is based will call for discussion further on. I anticipate here only to the extent of asking on what plea it can be maintained that, whilst an idea is *not* something that happens, a mental image *is* something that happens. What happens, as an event in my mental history is surely, in either case, the

* *Principles of Logic*, p. 526.

process or act of apprehending; and the process or act in question is as little an image in the one case as it is a logical idea in the other. A mental image, I presume, does not, any more than a logical idea, apprehend itself; it involves, therefore, just as the logical idea does, an act or process whereby it is apprehended. And there is no more appropriateness that I can discover in saying that what is imaged is "in my head" than, in saying that what is conceived is stationed there. Moreover, I venture to urge, that if we start by assuming so fundamental a difference between, what I will call for the moment, mere perceiving and thinking, if we ascribe existence to a sensuous image and deny it of the logical idea, we have *ex hypothesi* shut ourselves off from the possibility of finding a psychological means of transition from the one to the other. The cleft between sense and thought would be complete and final, and could not be bridged over by any amount of psychical development. Evolution can be called in to aid us only if the earlier and the later stages are the *same in kind*; it is helpless as a means of explanation if they are not. Lotze, indeed, is consistent in this respect: he postulates a unique and special activity to account for the products of thought. Mr. Bradley, on the other hand, seeks to make the passage partly by means of the principle of Association, although, as I shall try to show, the interpretation he puts upon that principle itself contradicts the notion that ideal contents differ in kind from sensuous contents.

I consider, secondly, the act of apprehending. The act of apprehending is, we have maintained, an existing fact, and therefore is not as such a content apprehended. But although it be true, as I think, that we have no direct or immediate knowledge of the nature of a psychical state, we can legitimately enough seek to secure inferential knowledge about it from a consideration of the results to which it gives rise. As a convenient way of leading to such inference, I refer here to Professor Huxley's somewhat remarkable defence of Hume's

theory of the original "furniture of the mind." Huxley admits that, in treating of "ideas of relation," Hume fell into "a chaos of confusion and self-contradiction." But he conceives it possible by the introduction of a slight modification to save the doctrine from inconsistency. Huxley's own solution of the problem over which, he thinks, Hume stumbled is the following, "When a red light," he declares, "flashes across the field of vision, there arises in the mind an 'impression of sensation' which we will call red. It appears to me that this sensation, red, is a something which may exist altogether independently of any other impression, or idea, as an individual existence." So far he is in accord with Hume. But if a second flash of red light were to follow the first, then presuming the sentient being is endowed with memory, there might, so Huxley conceives, arise in his mind two altogether new impressions, those of succession and of similarity. Or if two flashes of red light were to occur together, then there might arise in addition an impression of co-existence. Such impressions of relation are, he holds, ultimate, simple, unanalysable facts of mind. "They differ from other impressions in requiring the pre-existence of at least two of the latter. Though devoid of resemblance to the other impressions, they are, in a manner generated by them. We may regard them as a kind of impressions of impressions."* This mode of surmounting the difficulty is interesting because it exhibits with undisguised clearness an assumption which lies at the root, not only of the doctrine of psychological Atomism, but also of other ways of solving the problem indicated, more in favour at the present day. It is assumed namely that presentations already formed, with distinguishable traits of resemblance and difference, become *first* of all the possession of the mind, and *then, through a subsequent process*, are compared and distinguished. They are taken to be the material upon which the process of recognising features of

* Hume (*English Men of Letters*), pp. 68 and 69.

relatedness supervenes. The Atomism implied in Huxley's statement need not detain us. Let that statement be so far modified as to involve the admission that if on the appearance of two presentations a and b , a third new idea γ arises, expressing their likeness or difference, there must be some inner activity of mind at work, which at once holds a and b together and holds them apart. Even then the assumption remains that this idea of comparison springs up *de novo* when the presentations, a and b , already with definiteness and precision of outline, are compared or discriminated from one another, in the inner field of the mind's contemplation; the assumption remains that the presentations are so many given or prepared entities upon which a unique activity operates and produces by its operation the new ideas of relation. One can hardly avoid the reflection that such a mode of viewing the matter simply precludes us from framing any intelligible theory of how the results we are anxious to explain come about; it is at least certain that it offers none. If, however, we are in earnest with the contention that the content apprehended is not an existing fact, then we are bound to reject the assumption in question as unwarranted and untenable. For, in that case, presentations, as we have seen, are not offered data which we have merely to accept, but are themselves in all cases products. In that case, recognition of a sense-presentation as a separate content is only possible if there be furnished in the inner life sufficient means of discriminating it from whatever else may happen to be presented. In other words, the act of presenting is itself an act of discriminating, comparing and relating; there could be no presentation at all, not even the crudest, without the exercise of an activity identical in kind with, however it may differ in degree of complexity from, the more mature and elaborate activity to which the name thinking is specifically assigned. I quite acknowledge that definite apprehension of relations as distinguishable features in the whole complex of contents is not there at the outset, that

only by degrees do we become able, partially at least, to contemplate relations in their generality, as apart from the concrete whole in which at first they make their appearance. In other words, I do not imagine that, even though discrimination and assimilation are primitive processes, involved even in the simplest form of sense-presentation, the subject would, therefore, be originally capable in any way of separating from the like or different contents the more general, the more abstract conceptions, of likeness or difference. But that is not at all inconsistent with the view that even the simplest apprehension of a sense content takes place through means of an activity the same in kind as that with which we are acquainted when we regard in isolation the relations of likeness and difference, of equality and inequality, and so on. Let me try to make my meaning clear in yet another way. Mental development does not begin with differing presentations already given, and then by a process of subsequent reflection upon them discover wherein they differ. Subsequent reflection is mainly concerned in clearing up, in giving prominence to, characteristics already involved in having different presentations at all. Some amount of recognition of their difference is, that is to say, an indispensable part of the presentations themselves. Thus, instead of assuming an initial multiplicity of separately given presentations, by comparison of which we attain to ideas of relation—of similarity, dissimilarity, and the like—we are entitled, in conformity with the principle on which we are proceeding, to maintain that the experience of a primitive mind would consist of a vague, confused, ill-differentiated, whole of presentation, and that, by successive acts of discriminating there would gradually emerge definite contents, the relations of which, in consequence of a development, some of the chief steps of which I hope to show it is not impossible to trace, come later to be apprehended by us in the form of concepts or notions. The further back we go in the history of the mental life the cruder and more incomplete we must suppose its contents to

be—wanting in sharpness of outline, loosely distinguished from one another. At such a stage, the several stimulations of sense would be taken up and interpreted by a mind containing but scanty preparation for the purpose. Moreover, the vagueness of apprehension at this early period would be aggravated by the fact that the sole general point of reference in the mental life would consist almost entirely of that obscure mass of sense-presentations and feelings connected primarily with organic changes in the body. No background of self-consciousness would as yet have been formed, over against which successive presentations might stand out as referring to that which was other than self. In consequence there would be a certain want of continuity in the mental life, it would be easily distracted and essentially aimless in character. And in like manner a correspondingly rudimentary type of being would be exhibited by the process of apprehending; the several modes in which the mind ultimately comes to operate would not yet have acquired definiteness of character; the elementary activities which lie at the root of all the after developments would be as yet in closest conjunction with one another, there would, for example, be few marks of demarcation between feeling and perceiving and striving. Accordingly, in respect both to content and process, there would be manifested the same features of vague formlessness and indefiniteness. So far as the content is concerned, development would take place through increase in the number of points of difference that were recognised, through increase in the lines of connectedness by which the several features were grouped together, and through change in the character of the relations by which they were united one with another. So far as the act of apprehending is concerned, development would take place through the elementary processes gradually acquiring distinct characteristics—perceiving, for example, coming to be distinguished from imagining or remembering—and through increasing ease and

quickness in their exercise. Alike, then, in its earlier and in its more developed stages, the essence of an act of apprehending would appear to consist in discriminating, comparing, and relating.

3. APPREHENSION CONSIDERED AS ATTENTION.

A comparison of the position just sketched with Dr. Ward's much discussed theory of Attention may serve as a means of further elucidation. Dr. Ward proposes to denote by the term "Attention" the one common element at the root of all psychical processes, the activity namely of the subject manifested in them. Recognising the somewhat formidable enlargement of the ordinary meaning of the word involved in his proposal, Dr. Ward defends it on the ground that to use Attention in this wider sense would be following the precedent of physicists in their usage of the terms "magnitude" or "heat" (*i.e.* temperature). "Many an unsophisticated old lady would demur to one who described the minuteness of a snow crystal in terms of magnitude or its temperature as so many degrees of 'heat' (reckoning from absolute zero)."*

I note, at the outset, that what has been said above about the act of apprehending agrees in certain not unimportant respects with Dr. Ward's account of Attention. We have followed him in holding that an ultimate psychical activity is involved in the apprehension of any presentation whatsoever, whether such presentation take the form of the crude contents of the primitive consciousness or of the most elaborate concepts of scientific reasoning. We have followed him, also, in resisting the attempt to transfer this activity from the side of the subject to that of the presented contents, and to endow the latter with mysterious powers of interacting, of attracting and repelling one another. And, once more we have accepted his principle that the activity in question is not *qua* actually

* *Mind*, xii, 1887, p. 56.

occurring a content of apprehension. The grounds offered, however, in support of this last principle are different in the two cases. According to Dr. Ward, attending cannot itself be attended to, because whilst Attention is psychologically subjective, presentations are not, and, since the subjective *qua* subjective cannot be presented, we can only know of Attention by its effects, by the changes it produces in the character and succession of our presentations. According to the view I am trying to explain, on the other hand, an act of apprehending does not apprehend directly its own activity, because that activity consists in discriminating a content, and cannot, therefore, at the same moment, and in the same relation, be itself that which is discriminated. Moreover, if by a further act of apprehending a previous act of apprehending is made matter of contemplation,—and I am far from denying that it can be,—then it has become an object, and there is no more reason to suppose that content and object are identical in its case than in any other case of apprehension.

The difference just indicated leads at once to the fundamental point concerning which I find myself compelled to dissent from Dr. Ward's theory. Dr. Ward, if I understand him rightly, regards activity and presentation as *toto genere* separate and distinct; the subjective faculty or function of Attention or Consciousness, on the one hand, and the field of Consciousness, consisting of presentations or ideas, on the other, seem to him to belong to two entirely independent orders of psychological facts. Attention has its seat in the "pure" ego, presentations go to constitute what in contrast thereto may be called the "empirical" ego. Presentations are "given" and may be said to be there, *before* the direction of Attention upon them; Attention may not unfairly be described in Lotze's words as "a moveable light which the mind directs on to the presentations it receives." Dr. Ward, if I mistake not, would be ready to admit that Attention, as psychical activity, may be conceived as practically identical in character throughout the

course of mental evolution, somewhat after the manner in which biologists may conceive of vital force as practically identical in character throughout the various stages of the evolution of living organisms; what grows or develops is the objective *continuum*, which is gradually differentiated into increasingly distinct and definite presentations and ideas. Here, then, we have a conception of conscious experience, worked out with great care and thoroughness, which presupposes a severance between activity and content precisely such as I have been attempting to show is inadmissible. And I cannot think that the severance, as it appears in Dr. Ward's treatment of the mental life, is either in itself justified or that it enables us in any way to account for the facts it is supposed to explain. I do not think it is justified in itself. The argument offered for it appears to be based on the ground that either the severance must be allowed or else we stand committed to the "Presentationism," which would resolve psychical activity ultimately into a property of "contents of consciousness," considered as independent existences that act and react upon one another. But these alternatives are not by any means exhaustive of the possibilities of the case. They only seem to be so through our inveterate habit of ascribing a mode of existence to presentations which, if there be any validity at all in the considerations I have been urging, cannot maintain itself as a result of critical examination. I venture to suggest that Dr. Ward has made in reality too large a concession to "Presentationism." If presentations, full fledged, are allowed to be there prior to the exercise of attention or psychical activity, if the chief function of the latter be limited to bringing the former into clearness and distinctness of apprehension, then the fundamental position of "Presentationism" has been already conceded. It is surely from the constitution of presentations themselves that the main evidence of the mind's activity must be sought; it is the appearance at all of presentations, which "Presentationism" has simply to accept, that is rendered wholly enigmatical on the

assumption that no such activity is involved. Again, I do not think that the severance in question enables us in any way to account for the facts it is supposed to explain. I mean, in other words, that no insight into the psychological character of these facts is possible if we conceive of Attention as a unique and separate power, the variations in which depend only on the way in which it is exercised. By concentrating attention upon presentations we are said to increase their intensity, their clearness, their distinctness. But, as Lotze long ago pointed out, a mere gazing at anything, even if it were heightened to infinity, would in itself be utterly powerless to achieve this result. The clearness or obscurity of the content does not signify that we apprehend with more or less energy the same content, but that in the one case we are, and in the other case we are not, able to apprehend a sufficient number of distinguishable marks. The possibility of recognising such distinguishable marks is evidently conditioned to a large extent by the amount of experience that can be brought to bear upon the content attended to. It is only in so far as there are means at hand of comparing the presented content with, of relating it to, trains of representations and ideas already acquired by the mind, that a larger number of characteristic marks will be ascribed to it, and that it will stand out with greater definiteness and distinctness. In strictness, we are not, I should say, psychologically warranted in regarding that which we apprehend now more and now less intensely as the same content. It is, in truth, in each case a different content, just as in each case the act of apprehending is different.

I believe, then, that we can furnish a psychological explanation of the clearness and distinctness, which form at least one familiar result of attending, only by connecting the whole process of attending with what seems to me the more comprehensive and ultimate activity of discriminating and comparing, of recognising differences and likenesses. But the activity of discriminating and comparing is never a bare activity, never a mere putting forth of force or energy. It

exists only in its concrete modes of operation, and it derives its concreteness, its specific character, from the variety of content with which it is inseparably connected. We have not, therefore, here, let me repeat, two independent facts. The content apprehended possesses whatsoever mode of being we may consider ourselves justified in ascribing to it only in and through the process of apprehending itself. It is in this respect a product (although, as we shall see later, to call it a product in another, and very different, respect is an error), and any individuality or distinctness it may exhibit depends in large part upon acquired experiences which in and through the act of apprehending may be brought to bear upon it. I say "in part," because it is not intended, by any means, to assert that what may be described as the positive nature of sense-presentations is generated by any mode of subjective agency. Quite the contrary. That we should distinguish, for example, red from blue is possible only if there be, in addition to stimulation of the senses, discriminating activity on our part, but the positive nature which renders each of these colours what it is depends undoubtedly upon what is peculiar to the specific kind of stimulation involved. The stimulation itself, however, forms no part of the apprehended content, and, whatever its exact relation to the latter may be, is, in any case, only one of the determining conditions that occasion the process in and through which the content makes its appearance. The acts of apprehension which constitute the veritable movements in the life of the subject are carried out under varying conditions, and similar stimuli may be, and will be, followed by presentations of very great variety of characteristics in successive apprehensions. In other words, although the general character of such acts be preserved through all the stages of mental development, there must needs be endless differences in the specific modes in which this general character will be manifested, depending on the degree of richness and fulness of the mental life in question.

4. THE THEORY OF SENTIENCE.

I have sought in the preceding section to bring out, through means of a criticism of Dr. Ward's theory of Attention, some of the implications of the view I am taking of the nature of an act of apprehension. I propose now to attack once more the problem before us from the other side and to contrast the view we have taken of the content apprehended with a widely accepted doctrine of current psychology. I refer to the doctrine of what is described as "sentience," or "anoetic consciousness."

The meaning which is attached to these terms has been explained from two points of view, from the point of view of an analysis of what is involved in mature experience and from the point of view of mental growth or development. From the first point of view, it has been maintained that there is a certain body of indirect evidence confirming the conclusion that there is more in consciousness at any one moment than can be discriminated or known. "My thought discrimination," it is contended, "is very far from keeping pace with the differentiation of the sensory data as immediately experienced," and this statement is supported by reference to what psychologists have been accustomed to describe as the "area of inattention," and by reference to the mass of organic sensations, constantly present in consciousness though usually only in the vaguest way. On the strength of these and allied phenomena, the conclusion is drawn that "thought and sentience are fundamentally distinct mental functions," and that we ought to recognise even in the mature inner life a radical distinction between presentations as differentiations of sensory data immediately experienced on the one hand, and presentations which have been discriminated *by* thought and have thus become significant *for* thought, on the other. The former, the undiscriminated zone of presentations surrounding at any moment those which are distinctly apprehended is, then, to be conceived as at all times an ultimate constituent of mind,

having an existence relatively independent of thought, which is discriminative only because it has presentation for its vehicle.* From the second point of view, it has been maintained that the earliest stage of mental life must be regarded as a mere mass of undiscriminated presentations, which form one whole of feeling, in the sense of immediate experience. In the beginning, says Mr. Bradley, in the article to which reference has already been made, "there are no relations and no feelings, only feeling. It is all one blur with differences that work, and that are felt, but not discriminated." And again in the beginning there is for the mind "no discretion, or even discrimination." "All is feeling in the sense, not of pleasure and pain, but of a whole given without relations, and given *therefore* as one with its own pain or pleasure."† From this basis of pure sentience it is, he considers, the business of psychology to trace the way in which apprehension of definitely discriminated presentations, with distinct objective reference, comes about. And inasmuch as a felt background of sentience is supposed to persist throughout all the stages of mental experience, forming one feature at least of the consciousness of self, this account of the matter may be regarded as supplementing from the genetic point of view the other analysis already referred to.*

With regard to the substantial truth of much that is involved in these contentions one can entertain no doubt. As against the older doctrine of Atomism, for example, the theory has done good service in emphasising and working out the conception of experience as a continuous advance from a condition of vague, chaotic indeterminateness to a condition of relative definiteness and distinctness of apprehension,—an advance, which consists not in somehow connecting the unconnected but in the gradual differentiation of what was previously undifferentiated, and thus, by degrees, to use one

* G. F. Stout, *Analytic Psychology*, vol. i, p. 48 *sqq.*

† *Mind*, xii, 1887, pp. 363 and 367.

of John Grote's metaphors, enabling a pattern to come out of what was originally a confused whole. It has done good service, again, in insisting upon the essentially discriminative character of thought, and in connecting this feature with what we call, obscurely enough, "reference to an object," although it does not follow that discrimination and objective reference are rightly confined to thought, in the usual acceptance of that term. And it has done good service, also, in enforcing the consideration that, as we descend the scale of psychical existence, we must conceive of sense-presentations and feeling-tone as distinguishable from one another by fewer and fewer characteristics, although it has been too hastily inferred that if these two become indistinguishable they must needs be identical, and too little recognised that feeling-tone no less than sense-presentation must be very different at the higher end of the scale from what it is at the lower, where definite self-reference would be no feature of it. The points, however, which concern us at present are whether, on the basis of the theory, a sufficient case has been made out: (*a*) for distinguishing a thought from a sense-presentation on the ground that the former involves reference to something which is not a present modification of the individual's consciousness whilst the latter *per se* involves no such reference but is a "special mode of subjective experience," and (*b*) for supposing that differences may be felt or immediately experienced without the exercise of discriminative activity on the part of the subject.

There is difficulty in coming to close quarters with the first of these positions, on account of the ambiguity attaching to the term "subjective," an ambiguity which is liable fatally to confuse the question at issue. As to the differing meanings of the term "subjective," something will be said further on. Meanwhile, it must be pointed out that the term may be used to indicate a process or event taking place in the individual mind, more strictly a process or event of the individual mind or it may

be applied to any content of apprehension which an individual for the time being includes in those trains of presentations, ideas and feelings that constitute what he calls himself as distinguished from the not self. Evidently it is the former and not the latter significance that the term is here intended to bear. But, when the appeal is made to introspection, when, in illustration of what is meant by sentience, we are directed to such experiences as those in the field of inattention,—“the rumble in the street, the ticking of the clock, the pressure of the seat on which we are sitting,”* and so on,—the plausibility of the contention that these are “special modes of subjective experience” lies, I think, in the fact that they may all of them be, *for us*, “subjective” in the latter sense. The *mature* mind tends, not of course invariably, but certainly in no small measure, to refer experiences that are vague, indefinite, incoherent, to what Professor James calls the *me*; extremely faint auditory and visual presentations *we* tend to assign to the “empirical ego,” largely because the means of localising them in the objective sphere are absent. This, therefore, is one of the results of the formation in us of a distinct conception of self; it lends no confirmation to the view that presentations are, either for us or for the primitive mind, “subjective” in the former of the two senses I have mentioned.

Passing, then, now to the contention that presentations are “subjective” in the sense that they are immediately experienced as “modifications” of the individual consciousness. I urge, in the first place, that, if they are, the operation which, according to the theory, is performed by thought is altogether inexplicable. The function of thought is to refer “this very feeling or presentation to an object.”† But why should thought refer a “modification” of the individual consciousness to something which is not a modification of the individual consciousness, but

exists independently of that consciousness? And if this were thought's method of procedure, what possible logical validity could it possess? A modification of my consciousness is *co ipso* precluded from being a modification of anything else either in earth or heaven and any "transcendence of immediate experience" as thus understood would be infected through and through with contradiction. The assumption of the "unity of the universe," even if we grant that thought is entitled to that assumption, would not save it from contradiction, for the universe may be a unity and yet full of the greatest variety of difference. The procedure of thought becomes all the more unaccountable when we remember that it, too, psychologically considered, is a "passing modification of consciousness," that it, too, as it occurs, is "an immediate experience or feeling." Why should one of the individual's feelings refer another of the individual's feelings to an object which is either outside the field of the individual's feeling altogether, or, if inside, is essentially other than the particular feelings involved in the operation? * "Immediate experience," it is argued, "being essentially fragmentary, points beyond itself, so that in knowing it we *ipso facto* know that to which it is related." † But, on what criterion can it be pronounced "fragmentary"? In the beginning, at any rate, we have no other experience with which to contrast it: the fact of its fragmentariness cannot therefore be used to explain how any other kind of experience arises on its basis. How does it happen that out of this immediate experience there should spring the mediate experience which knows it as related to what at the moment is not immediately experienced? And, assuming that one portion of immediate experience does come to cognise another in this way how can we ever be assured that it is not through the very act of cognition and not in virtue of its own inherent

* *Cp. Ibid.*, p. 502.

† G. F. Stout, *Things and Sensations* (in *Proceedings of British Academy*, vol. ii).

nature that immediate experience appears fragmentary and full of implications that point beyond itself? Moreover, the distinction between process and content, which has been denied in the case of immediate experience, is abruptly introduced, as a consciously recognised distinction, when, in the case of cognition, we advance beyond what is immediate, for then presentation becomes for thought a content, whilst thought itself as occurring is an "immediate experience or feeling." But why should a colour, in so far as at any moment it is actually being seen, be psychologically identified with the seeing, whilst, in so far as at any moment it is actually being cognised, it is not identified with the cognising? What difference is there *in the red* that I immediately experience and *in the red* that I cognise, to justify me describing the latter as a quality and the former as a process?

I urge, in the second place, that if we start with presentations as subjective modifications, it is even more a question of how we come to an awareness of self as an individuality, of "how we get into ourselves," as Dr. Caird puts it, than of how we come to an awareness of an independent not-self. If we begin with an experience in which experiencing and the experienced are identical, and if this experience remains the basis of our knowledge throughout, then it is impossible, so far as I can see, to account for the fact that we come to attribute the experiencing to our own finite personality. A succession of subjective modifications, in which experiencing and experienced were one, would be, in Dr. Ward's words, an "entirely impersonal and intransitive process," in regard to which the term subjective would really be meaningless. Even though it be allowed that in such a process the experiencing is distinguished from the content as "colour in general is distinguished from this or that special colour," the difficulty is not lightened, for the finite self is certainly not conceived as experiencing in general. Nor can I see that the fact of some of these subjective modifications becoming cognitive would

mend the case. For, since presentation is its "vehicle" throughout, and since presentations are *all* subjective modifications, cognition would have no ground on which to found a distinction between subject and object. The basis of that distinction must be there from the beginning; there is no possibility of introducing it later on.*

I turn to the other of the two points singled out for discussion. Has the theory we are considering succeeded in showing that differences may be felt or immediately experienced

* Dr. Stout, in his recent contribution to the *Proceedings of the British Academy* (vol. ii), has indicated how, in his view, some of the objections I have been raising can be met. He admits that "if we start by assuming that the individual is initially confined within the circle of his own immediate experiences, it seems impossible to discover how he can ever get beyond them." But, he argues, "from the outset, there are features of our immediate experience which perpetually point beyond themselves to actual existence, other than our own, or than any immediate experience of ours." Such features are "our awareness of passivity in undergoing sensations, in combination with our awareness of activity in determining what sensations we shall undergo." It is to be regretted that within the limits of his paper he was prevented from developing this contention in detail. Certainly, the brief exposition which he gives of it suggests numerous difficulties. I do not understand, for example, how "specific modifications of the individual consciousness" can be described as "passive." Are we to suppose that the subject merely receives presentations as so much material imported into his being from without? But in that case, they would not be "specific modifications of the individual consciousness," that is to say, not processes of experiencing at all. And, on the other hand, if they are not thus received, if they are reactions of the mind on stimulation, how is the antithesis of passivity and activity to be constituted? Again, "our awareness of activity in determining what sensations we shall undergo," is a perplexing notion when used of experience "from the outset." If the primitive subject is already capable of determinations of this sort, and all that they involve,—the distinguishing of ideas from presentations, the representation of an end, awareness of self, and so on,—then, no doubt, it may accomplish much. But the crux comes when we attempt to conceive of all this as a "feature of immediate experience." Further, even granting that, in the manner indicated, the primitive subject does become aware of the not-self as an activity correlative with his activity, why should that suggest that it is like in kind to his own? His activity consists in "getting sensations," its activity consists in "determining their occurrence,"—surely two very different operations.

without the exercise of discriminative activity on the part of the subject? It is admitted that there is no direct evidence to be offered in favour of the position. We can only know what we do discriminate. But it is regarded as one of the characteristic marks which distinguish sentience from knowledge that the latter is discriminative whilst the former is not. I cannot agree that the facts adduced, which in themselves no one need be concerned to dispute, are in any way conclusive proof of the theory; they seem to me quite compatible with another mode of explanation. The difference between the presentations of an object in the area of inattention and the presentations of the same object in the area of attention need not, for example, be the difference between presentations discriminated and presentations undiscriminated; the difference may quite well be, as James and Lipps have maintained, between a greater and less degree of such discrimination. Dr. Stout quotes, as an illustration of the way in which thought discrimination fails to keep pace with the differentiation of the sensory data as immediately experienced, a case mentioned by Abraham Tucker, who says,—“we may see leaves falling from the trees, birds flying in the air, or cattle grazing upon the ground, without affirming, or denying, or thinking anything concerning them; and yet, perhaps, upon being asked a minute afterwards, we could remember what we had seen.” Quite so; but then these are not undiscriminated presentations. On the contrary they are presentations that are characterised by a very large amount of discrimination. And if it be argued, we know on reflection that there was more detail in those presentations than we did discriminate at the time, the reply is that such an assurance on our part is perfectly explicable without resorting to the hypothesis of merely felt differences that have not been discriminated. “Leaves falling from trees,” “birds flying in the air,” and so on, are familiar objects enough, and, although for the moment they occupy the area of inattention, they have been attended to over and over again. And when, on reflect-

ing afterwards upon the circumstance depicted, we conclude that we might have seen very much more than we actually did see, we may be doing no more than bringing previous experience to bear upon the particular phenomena in question. And so with reference to another instance upon which stress has been laid.* "In cases of lingering illness and where a pain of low intensity is an almost constant accompaniment, the sufferer will say that he is able to forget it at times, using the word 'forget' in reference, not to past feelings of pain which he no longer remembers, but to present feelings of pain which he ceases to discriminate." Here, once more, I believe the facts can be accounted for, and without in the least distorting them, by means of a different hypothesis. The patient, when the period of so-called "forgetfulness" has elapsed, is aware that all through this period he has been experiencing the pain in a lesser degree of intensity, that there has been in truth no break between the pain in its former acuteness and the pain in its present acuteness, he is aware that in the interval his "attention" has been "absorbed in a pursuit disconnected with it," and that if it had not been so absorbed the condition of things during the interval would have been for him otherwise. It is not, therefore, surprising that instead of describing his present experience as new, he should use the expression which our psychologist insists on interpreting with such literalness. And, indeed, on *any* hypothesis, it is impossible to maintain that the pain as a mental occurrence would be altogether uninfluenced by other mental occurrences going on contemporaneously; on *any* hypothesis there could not be processes of attention taking place in the way described without in some measure inhibiting other states of mind to which they were opposed. Moreover, particularly in regard to pain, the theory we are considering can be met by an appeal to ordinary experience. That theory

* By Mr. A. F. Shand, in a suggestive article already referred to, on "Feeling and Thought" (*Mind*, N.S. vii, 1898, pp. 487 and 489).

implies that pain may and constantly does exist as a feeling, and yet the subject be totally unaware of its existence. For feeling in itself is "blind," is "unconscious";* in order to become conscious of it, the subject must discriminate and identify it by an act of thought or cognition. Now, if there is one thing certain to be obtained from introspection, it is that there may be experience of the most intense pain without anything of the nature of what is usually called thought or reflexion. This fact is, I submit, much more consonant with the view that the discrimination necessary for apprehending the pain comes about in and through the mental state by means of which it is experienced than it is with the view according to which the pain is one mental state and its discrimination another.

The theoretical objection to severing the discriminative acts from the contents of consciousness, regarded as so much data for discrimination, is precisely similar in import to that which we have already urged against Dr. Ward's theory of Attention. "I do not hesitate," says Dr. Stout, "to stigmatise this separation of activity from content as a most serious error."† If, however, it is an error in the one case, there seems little reason for supposing it to be anything else in the other. Yet, when presentations are described as "material" which thought may or may not utilise, when the objective reference of thought is spoken of as "supervening on purely anoetic experience" and giving rise to "a completely new psychological fact," it can hardly be denied that a separation of the kind stigmatised has, in truth, been made. Presentations are taken to be differentiated facts upon which the activity of discriminating is directed, and which, as a result of such activity, are cognised by us as different facts. But the moment the question is asked, how, then, is the discrimination to be conceived as

* *Mind*, N.S. vii, 1898, pp. 484 and 490.

† G. F. Stout, *Op. cit.*, vol. i, p. 201.

coming about, insuperable difficulties confront us. Suppose, for example, we say that the discrimination of a content A implies recognition of its resemblance to other presentations, its reference to a class of which A^1, A^2, A^3 are members, then if we separate the contents A, A^1, A^2, A^3 from the act of discriminating, we shall be unawares taking the content A as it is *after* the act of discrimination to be the fact given to be discriminated. The consequence is our answer to the question will involve us in a vicious circle,—on the one hand, we shall assume recognition of the resemblance between A and the other members of the class in order to explain the discrimination, and on the other hand we shall assume discrimination in order to explain the recognition of resemblance to the other members of the class. And whenever the attempt is made to show in what way a presentation as immediately experienced differs from a presentation that is cognised, that same dilemma, in one form or another, breaks out afresh. On the one hand, it is contended that the cognition of a presentation implies that it is both immediately experienced and related to what at the moment is not presented; on the other hand, that the immediate experience of a presentation implies its differentiation, which differentiation must needs imply that it too is related to what at the moment is not presented.* In other words, although thought and sentience are declared to be “fundamentally distinct mental functions,” there is no point save one on which the distinction can be made to turn. In the long run, it would have to be admitted that, according to the theory, thought involved the conscious use of ideas of relation recognised as such. But, in the first place, it could not be maintained that without such recognition, *knowledge* is impossible, and, in the

* (p. Mr. Shand's article, p. 496, where he takes Mr. Bradley to task for denying the presence of relations in feeling, though the reason why the latter hesitates to take the step Mr. Shand desiderates is sufficiently obvious.

second place, to suppose that ideas of relation spring up *de novo* when presentations already with definiteness and precision of outline are deliberately compared and contrasted is to relinquish the problem of giving any psychological account of their genesis.

Apparently, Dr. Stout does hold that, since sentience and thought are fundamentally distinct, any attempt to trace the psychological development of thought from sentience is *eo ipso* precluded. At all events, he expressly dissociates himself from Mr. Bradley's mode of effecting the passage from the one to the other.* Let us, however, look for a moment at Mr. Bradley's account of the matter. He starts, as we have said, with a mental life consisting of "a continuous mass of presentation in which the separation of a single element from all context is never observed."† From certain of his descriptions one would be almost tempted to conclude that he conceived the primitive mind somewhat after the fashion of a Leibnizian monad, containing preformed within itself as feeling all that later becomes articulated into the phenomenal world of knowledge, had he not, on various occasions, so decisively repudiated that conception as scarcely deserving criticism. Given, then, this original psychical *ἄπειρον*, and recognising its position as a part of the whole to which it belongs, Mr. Bradley undertakes to show how thought may have been generated, without importing into his analysis anything of the nature of a special power or faculty. The process he employs for the purpose is that of Association, but with its principles so modified that one can scarcely recognise in it any remnant of the traditional doctrine. The Atomism of the latter he banishes wholly, and in like manner the "Law of Similarity"; the "associated links" he regards no longer as conjunctions of existences, but as connexions of content. Every philosophical student is indebted

* G. F. Stout, *Op. cit.*, p. 51.

† *Mind*, xii, 1887, p. 357.

to him for his masterly criticism of the discarded features, a criticism which is as convincing as it is brilliant. The question, however, presents itself whether Association as thus modified is not too delicate and refined a process for the work it is here called upon to do, and for the material with which it has here to deal. We shall see. First of all, Mr. Bradley restates the meaning of Contiguity so as to make it depend on identity of content: the law becomes that of Redintegration, expressed in the form "every mental element when present tends to reinstate those elements with which it has been presented." Then he postulates further what he calls the law of Blending or Fusion, much neglected, so he thinks, by English psychologists,—the law, namely, that "where different elements (or relations of elements) have any feature the same, they may unite wholly or partially." And, finally, he considers that underlying these two laws there is to be discerned one principle,—the principle which we may describe as that of Individuation, according to which "every mental element strives to make itself a whole or to lose itself in one," or, in other words, "tends to give itself a context through identity of content."

I remark not now upon the prevailingly active character ascribed to mental elements by the use of such phrases as "striving" and "tendency"—phraseology which forcibly recalls Herbartian conceptions. I confine attention rather to the one fundamental consideration as to how the principle of Individuation can find application to the contents of the rudimentary or primitive mind. Redintegration, we are repeatedly told, is an association not between particular facts but between universals; what operates in it is never an external relation between individuals, but an ideal identity within the individuals. Granted; but then in the mental life

* It seems curious that in discussions about "psychical activity" it should be so persistently ignored that it is the activity to which the above expressions point that calls for explanation, and not specially the activity involved in volition.

at the start there is nothing "beyond mere presentation, that is, feeling with the distinctions of quality, quantity, and 'tone,' which *we* abstract from one another, but which at first come within one blurred whole which merely *is*."* At the stage of sentience, existence and content form one unbroken totality, no feature in the "what" of given fact has been as yet alienated from its "that," and where this is the case, we are expressly told, there is nothing ideal.† How, then, is it possible for the principle of Individuation to come into operation? On the one hand, it is declared to be precisely one of the functions of thought to "separate an element from the concrete basis" in which it is imbedded, and prior to some degree of such separation the principle of Individuation, according to the account given of it, would be useless. And on the other hand, the principle of Individuation is called into requisition in order to explain how thought itself emerges from the condition of mere feeling. Mr. Bradley tries to deprive this objection of its force by arguing that some degree of idealizing is prior to thought proper. "From the outset universals," he says, "are used, and the difference between the fact and the idea, the existence and the meaning, is unconsciously active in the undeveloped intelligence."‡ Be it so, but in that case the difficulty has only been removed to some stages further back. If "from the very first beginnings of soul-life universals are used," then obviously *those* "very first beginnings" are no longer *the* "beginnings" out of which thought was to be shown to emerge. The latter were declared to be "unbroken wholes" of feeling, at a level below distinctions, the elements of which are but conjoined, and are not connected, in which, therefore, universals cannot be used, because they have not yet made their appearance. And the moment the effort is made to advance from the one assumed

* *Mind*, xii, 1887, p. 365.

† *Appearance and Reality*, chapter xv.

‡ *Principles of Logic*, p. 39.

phase of primitive psychical life to the other, the dilemma just noted recurs. Mr. Bradley points to the incoming of fresh sensations, the disappearance of the old ones, and the conflict involved therein, as the "machinery" by means of which the transition is effected. But he admits that it is only as working *together with* the laws of Association and Blending that "the blind pressure and the struggle of changed sensations first begins to loosen ideal content from psychical fact."* Here, then, we come again to the same *impasse*,—some loosening of ideal content from psychical fact there must be before the principle of Individuation can come into operation at all, whilst until the principle of Individuation has come into operation the loosening of ideal content from psychical fact cannot so much as begin.

In no respect do the implications of the theory we are considering come more clearly to the surface than in the repeated stress laid by Mr. Bradley on the process of so-called Blending or Fusion. By that term there appears to be understood the successive experience of contents possessing features indistinguishably alike, in consequence of which the contents unite, their differences are destroyed, and there ensues a transfer of strength to the result. It would seem as though the formation of the fused or blended product came about by a kind of superposition of contents previously present as so many separate and independent facts in the mind of the individual. The whole phraseology accommodates itself readily to that mode of regarding the mental life according to which isolated sense-presentations are conceived as the original units out of whose aggregations conscious experience in its richness and fulness proceeds. There would, of course, be no justification whatever for attributing this view to Mr. Bradley,—no one has criticised it with more vigour and thoroughness than he,—but his retention of the notion in question indicates that

* *Appearance and Reality*, chapter xxvi.

presentations and images are still treated by him as having a quasi-substantive mode of being, altogether different from what can be ascribed to ideas or concepts. And in the end he is bound to confess that, in spite of all his efforts, there is no road that we can discover from the first to the second. "We are," he says, "unable to make the transition from the fused to the relational condition of mind, in such a way as either to see *how* this particular result did come, or to feel simply that it must be so and that no further explanation is required."* The reason, I think, is obvious. The theory of sentience, according to which differentiation must necessarily be prior to discrimination in the order of time and continue to be its basis throughout, rests upon the assumption that sense contents are factual existences, "hard individuals," so unique that each one "not only differs from all others, but even from itself at subsequent moments." The contents of thought, on the other hand, are certainly not existing facts, they, at any rate, do not as such, as universal ideas, form part of the sum total of existence. These two, then, if the assumption referred to be warranted, are separated from one another by the whole diameter of being, and we ought, in that case, to recognise that we are propounding an illegitimate problem in proposing to trace the way in which the one has been developed from the other.

5. SENSE-CONTENT AND OBJECTIVE REALITY.

The outcome of the foregoing criticism has been to confirm the position laid down at the outset that the term existence is wrongly applied to any contents of apprehension. I have tried to show that the opposite supposition which ascribes existence to the contents of sense-perception leads to contradiction and confusion. We may now seek to determine more in detail the implications of the view we have taken to be the true one. Let us confine attention for the present to what, in the language

* *Mind*, xii, 1887, p. 3

of the theory we have just been considering, would be called the knowledge or cognition of a sense-presentation, and try to make clear to ourselves the meaning we attach to a sense-presentation in this context.

We have used the word "product" in reference to a sense-presentation, and I have indicated that we require to be on our guard in so describing it. A sense-presentation we have taken to be a product in the significance that it is not a given fact, something imported into the mind, but is essentially that which arises in and through the act of apprehension. But a sense-presentation we have not taken to be a product in the significance that it is formed by the putting together of mental elements that have existed previously in separation. The latter is in truth precisely the notion we have striven all along to avoid. To sever the shares supposed to be contributed by sense and thought, whether the contributions be regarded as due to the operations of these assumed powers or in whatsoever other way they may be accounted for, is inevitably to conceive of the presentation as a resultant, a compound, that has come about through a combination of what were originally two detached elements. This mode of viewing the matter meets us most undisguisedly perhaps in the philosophy of Locke, and in his hands it leads to the conclusion that the element of reality in knowledge is that which is furnished from without. External things act upon the mind through the senses and produce impressions, which, when received, become images or psychical states, that exist in the mind exactly as a quality is supposed to exist in an external thing. These images are the *data* of knowledge, the subject uses them to construct pictures or likenesses, so near as is possible, of external things. The external thing exists, the picture exists, and the latter is all that can immediately be known. It is a product in the second of the two senses mentioned and as a product, as an existing fact, it stands between the mind and the external thing, and by its very position there screens the external thing from our

gaze. Locke, indeed, claimed to know how far the likeness was accurate, but that claim fell an easy prey to the sceptical criticism of his great successor.

I am quite aware that there are important points of difference between Locke's theory and the modern theory of sentience. Yet they have at least the one point in common that the presentation, or sensible appearance, and the external thing are regarded as two relatively separate and independent existences, of which only the latter can be immediately experienced. However much it may be insisted that there is no distinction to be drawn between the way in which we *know* external things and the way in which we *know* sensible appearances, since knowledge in both cases involves a transcendence of the immediately given, the fact remains that the immediately given which is a constituent of the second of these two acts of cognition possesses a very different significance for knowledge than the immediately given which is involved in the first. In the one case the immediately given *is* what is known, —known it may be as in relation to what at the moment is not immediately given, but still known *as it is in itself*; in the other case, the immediately given *stands for, represents*, the external thing we are assumed to know, but is *not* that thing, and the external thing is known *not as it is in itself*, but only through means of something whose existence is not its existence, but distinct therefrom. Whether we call the process by which we apprehend "the independent not-self" "inference," or "intuition," or prelogical "mediacy" matters in this respect but little; the "independent not-self" will not, in any case, come into knowledge as the sensible appearance comes into knowledge, and in some way you have got to get to the former through the latter. You may project the sensible appearance into, or fuse it with, the external thing, but still the projection or fusion is your act, not its, and there is no means of getting rid of the hypothetical character of the whole procedure. In other words, as in Locke's theory, the sensible appearance

occupies the position of a *tertium quid* between the knowing mind and the thing it would know, and interposes an insuperable barrier to the mind acquiring any certain knowledge of what is beyond itself.

Now, according to the view for which I am contending, there is no such barrier between the mind and its objects as that just indicated. Apprehension, using the term to include awareness of whatsoever description, is the same in kind throughout. There is always the antithesis, whether recognised by the subject or not, between the act of apprehending and the content apprehended, but that antithesis, when rightly interpreted, instead of throwing doubt on the possibility of apprehending existent reality, is the one condition on which that possibility rests. To state the case briefly, there are not three existing facts involved in the apprehension of a sensuous object,—the object, the presentation, and the act of apprehending, but two only,—namely, the object and the act of apprehending. The presentation does not stand between the act of apprehending and the object; it is no other than the way in which we apprehend the object.* Our apprehension may be, and doubtless will be, faulty, imperfect, incomplete, but there is nothing in the nature of the presentation, as such, that either must or can cause such faultiness, imperfection, or incompleteness. The presentation, in other words, is not a product in the second of the two senses mentioned above; it is not a compound of impressions and ideas; it is ideal in the sense that it is the interpretation or meaning which we, through the act of apprehending, put upon the object immediately before us.

Nor is there anything, so far as I can discover, in the conditions giving rise to sense preception on our part that in the least conflicts with what has just been said. Undoubtedly,

* I am using the term "object" here to denote that to which the content of apprehension is referred,—probably, on the whole, the preferable usage.

in having, as we say, sense-presentations there is involved stimulation of certain definite portions of the nervous organism, undoubtedly the particular character of any particular presentation will depend upon the particular character of the stimulation involved, and upon the particular portion of the nervous organism stimulated. But neither does the stimulation itself form any part of what we apprehend, nor is there, as it seems to me, any justification for supposing that it produces a *subjective* modification that enters into the presentation. What, on the contrary, it does do is to give rise to a particular act of apprehension, in and through which we discriminate a certain sense quality as *belonging to*, or *appertaining to*, the *object* which, at the moment, we are apprehending. We may, for convenience, call that component of the act of apprehension which is due purely and solely to the stimulation sensation, but, if we do so, we are compelled, on pain otherwise of endless confusion, to recognise that sensation and sense quality are fundamentally distinct. The sensation is, in that case, part of the mental act or process,—and a part, which we can only psychologically abstract from the whole fact; the sense quality, on the other hand, is not part of the mental process but part of what is discriminated thereby. For example, in and through certain processes of sensation, I apprehend an object as round or square, heavy or light, rough or smooth; I do not apprehend the sensation as having shape or weight or roughness or smoothness. And notwithstanding the arguments that have been put forward to the contrary, I must be dogmatic enough to assert that in visual sensation likewise a similar distinction holds. On looking at an orange, I become aware of its yellowness, and I know, on scientific grounds, that certain physiological and psychological processes have occurred by means of which the awareness has come about. But the yellow colour is apprehended by me as a quality of the orange, and not as a quality of the mental process through which I apprehend the orange. It is quite true that the yellow, as

a sensible appearance, may vary in a way in which I conceive the yellow of the orange does not vary, but the variation arises from particular objective conditions, and in no way entitles me to suppose that what I am apprehending is a yellow state of consciousness. The sensible appearance is still an appearance to me and not *in* me; it is as little entitled to be called *subjective* as that sensible appearance which I identify with the orange. In other words, it is still a sense quality and not a sensation-process. "The infant who is delighted by a bright colour does not of course conceive himself as face to face with an object, but neither does he conceive the colour as a subjective affection."*

A sense-presentation, then, is not something which we project or throw out into the real; it is not a *datum* produced in us by the action of the real; it is that which we *find* in the real, in and through the process of discrimination which, in some way, the action of the real upon us occasions or calls forth. When in analysing the process of sense-apprehension, we take for granted that the sense qualities come into being as *created* products of that process, we are introducing an assumption of our own which most assuredly the analysis will not justify, and for which it would be hard to discover a warranty elsewhere. There is no reason to suppose that real things only appear to have sensuous qualities in consequence of the mental spectacles through which we observe them. From this, however, it does not follow in the least that no distinction ought to be drawn between the real that appears and the real as it appears. Even though it be admitted that our "experiencing makes no difference to the *facts*" (and I think there is a sense, and not an unimportant one, in which that assertion is eminently true), it does not follow in the least that the facts *are* as we experience them. Our mental spectacles may be truly transparent, but for all that there may

* James Ward, Art. "Psychology," *Encycl. Brit.*, vol. xx, p. 41B.

be endless variety in their focussing and discriminating power. What they enable us to know may be in most cases but an inadequate, fragmentary and even erroneous representation of the real; and in any case, there will always be the difference between the representation and the actual fact. It is enough, if we can show that the representation is representation *of* actual fact and is not itself a fact which prevents us from knowing any other. That is what is meant by insisting that the sensible appearance is not itself an existent reality.

In the paper above referred to, Dr. Stout has made an able attempt to controvert this position. It breaks down, he thinks, when brought to the test of accounting for simple instances of the distinction between sensible appearance and material thing. He takes two such instances: (*a*) "I look at a candle flame, and, in doing so, I press against my right eyeball so as to displace it; immediately I become aware of two visual appearances instead of one. One of the visual presentations dances up and down as I move my eyeball while the other remains at rest." Now, insists Dr. Stout, "it is nonsense to say that the doubled visual appearance is the candle flame itself as imperfectly apprehended by me. On this view the imperfect apprehension must involve positive error." And why not? That is just what it would do were I not aware of the circumstances that have given rise to the appearance. Why may it not be a wrong interpretation that I involuntarily put upon certain conditions which ordinarily would indicate the presence of two candle flames? Because, the reply is, there is really no such misapprehension. "I know quite well that there is only a single candle flame, and yet the two visual appearances persist unaffected by this knowledge." A mistake, however, "vanishes when it is corrected." But does it—always? Men have known for some hundreds of years that it is a mistake to suppose that the sun revolves round the earth, and yet they continue to speak of the motion of the sun from east to west. Now, the sun's *motion* is certainly not itself a *sensible* appear-

ance. Its apparent motion is no doubt based on certain sensible appearances, but then so is the greater part of our knowledge. (b) The second instance is that of "the visual appearance of the full moon as seen from the earth's surface." "This," says Dr. Stout, "is certainly not a mere appearing but something which appears—a silvery patch with a perfectly determinate shape and magnitude." And we cannot say that this something which appears is just the moon itself as imperfectly apprehended, because when the impression of its size is rectified by full astronomical knowledge, the visual appearance, as such, remains just as it was before. But why should I not say, as I believe most people would, that the silvery patch is just the moon itself as it appears at a distance of so many thousand miles from the observer? We are perfectly assured that if somehow the real moon were suddenly blotted out of existence, the silvery patch in a second or two would vanish along with it. If, however, it is itself something that appears, if it is itself an existent reality "distinct" from the material moon, then there is no obvious reason why the latter's extinction should involve its extinction. Related to one another they may be, but existent things may be related to one another without the destruction of the one necessarily carrying with it the destruction of the other. Nor am I able to grasp Dr. Stout's meaning when he contends that a visual magnitude is incapable of being compared with the magnitude of a material thing. I do not grasp it, because immediately before he had been contending that ordinarily material thing and sensible appearance are blended in inseparable unity, and that our only knowledge of the extension of material things is obtained through our experience of the extensiveness of visual and tactual presentations.

To sum up. Sense-presentations, according to the view we have been taking, are not themselves existent facts, but manifestations of existent facts, as the latter are discriminated by apprehending minds. Our discriminative activity can never

be what it *knows*, and just for that very reason it *can* know the world of which it forms a part. The colours and sounds, and other sensible qualities, which it discerns in nature, are not creations of its own modes of exercise, they are, what they purport to be, features of the reality which it discerns. The discriminative power of finite minds may be circumscribed and limited in countless ways, they may be exposed to endless sources of error, but there is nothing in the nature of knowing as such to incapacitate it for the work it has to do, or to prevent it approximating ever nearer and nearer to the truth of things.

6. PERCEIVING AND THINKING.

One way of expressing the main result of our enquiry so far would be to say that mind is cognitive from the first, that in its earliest experiences it knows reality and is never the spectator of subjective states as such, that even the simplest and most rudimentary modes of its activity are already in essence acts of judgment. There is, however, a psychological disadvantage in extending too widely the scope of the terms thought and "judgment." If we recognise that the elementary function of discriminating, comparing and relating is present from the outset of the mental life's history, we may restrict the terms thought and judgment to the higher developments of mental activity, which involve both this elementary function and the results attained by it in the sphere of sense-perception. Thinking or judging as generally understood, is, of course, an extremely complex reflective act, which depends for its exercise on definite recognition of the distinction between the inner subjective experience of the individual and the real world apprehended by him about which his judgments turn. It is thought or judgment in this acceptation of the terms that I wish now to connect with sense-perception as we have interpreted it. I shall try to show grounds for holding that in thinking there is carried to a greater range of adequacy and

completeness just that same activity, whose character we have exhibited in dealing with sense-perception.

I propose then to consider three of the chief characteristics that would usually be assigned to thought as distinguished from sense-perception, premising only that thinking, as thus characterised, is never, in our mature experience, really absent from processes of perceiving.

(i) *The Subjectivity of Thought.*—I refer, in the first place, to the familiar distinction between sense-perception as immediate knowledge and thinking as mediate knowledge. Few expressions in psychology are used with such ambiguity as these terms “mediate” and “immediate.” Sometimes by “immediate” is meant primary as distinguished from derivative experience. If thus interpreted there are, it may safely be said, no elements in our mature mental life that can with any accuracy be pronounced “immediate,” none, that is, that have simply preserved their original character unaffected by the process of psychical evolution as a whole. Undoubtedly we are justified in looking upon the state of mind involved in apprehension of thought relations as higher and more developed than that involved in the reinstatement of previously experienced features by reintegration. But obviously it would be an error to suppose that the attainment of the former stage in a mental life can have left the latter unaffected. Höfding very rightly points out that there is no ground whatever for regarding the process of Association which takes place in the mature mind as a low form of psychical existence since precisely the highest intellectual content can be elaborated through its means.* Similarly, one may fairly conclude that not even the simplest sensory feature can remain through various phases of mental development unchanged. More frequently, however, “immediate experience” is described as signifying “experience just present, apart from definition, articulation, and in general

* *Vierteljahrsschrift f. wissenschaftl. Phil.*, xiv, 1890, S. 204.

from any insight into its relationships," "brute fact," data of sense, as contrasted with experience more or less "idealized," experience, namely, which "in addition to its mere presence, possesses Meaning."* Without repeating what has already been said in regard to the theory of sentience, I content myself here with emphasizing, what would now be generally conceded, that in no way can this interpretation of the difference between immediacy and mediacy be made to correspond with the difference between perception and thought. But there is, it seems to me, another way of expressing the distinction in question which does serve to bring out one of the prominent characteristics of thinking in opposition to perceiving as it takes place in mature experience. The distinction turns, I take it, not upon difference in the nature of the content but upon difference of relation to the object apprehended in the acts of perceiving and thinking respectively. In perceiving we appear to ourselves to stand in direct relation with the object perceived; in thinking, on the other hand, we appear to ourselves to stand in a much less direct relation with the object of our thought, the latter appears to be at a farther remove from our individual act of apprehension. It is this apparent remoteness of the object that furnishes at all events one of the grounds that lead us to represent thinking to ourselves as pre-eminently an inner activity. Thinking would ordinarily be contrasted with perceiving by what, for want of a better word, we may call its inwardness or reflective character.

"The advance of thought, in my view," writes John Grote, "is the simultaneous development of the distinct conception of ourselves, or our personality, and the distinct conception of objects of thought as independent of us; and each conception brings out the other. By an object of thought, as distinctly conceived, we mean something standing off from, though connected with, our thinking, and we cannot mean this

* Royce, *The World and the Individual*, vol. i, p. 56.

without a *co-conception* of ourselves, from which the other is relieved; nor is there any means of setting ourselves before ourselves, as something to be thought of, without distinguishing ourselves from something else."* As to the intimate connection between the development of self-consciousness and the development of the process of conceptual thinking there can be no question; a thinking mind and a mind conscious of itself are, as Adamson puts it, two ways of naming the same thing.†

I should prefer to state the problem of the psychological genesis of the consciousness of self in the form,—how to account for the origin of the distinction we draw so unhesitatingly in mature experience between the act of apprehending and the content apprehended. The key to the solution of that problem is to be sought, one can hardly doubt, in a consideration of those conditions which enable the primitive mind to mark off the body from extra-organic things. Mr. Bradley lays stress, in this connection, upon the relative constancy of the organic or systemic sensations which early leads to the formation of an inner core of feeling, the latter attaching to itself the entire body group of sense-presentations. He points to the close and direct way in which changes in the body-group are conjoined with feelings of pain and pleasure, and regards this feeling-mass as that which gradually grows into the self.‡ Without in the least disputing the soundness of this analysis so far as it goes, we are able, I think, to specify many other circumstances which tend in the same direction as those here indicated. In particular the experiences which come from movements of the body and its limbs are relatively regular as compared with the presentations which come about in consequence of such movements. The importance of the elementary experiences, hard, no doubt, to reconstruct psychologically, that precede and

* *Exploratio Philosophica*, Part II, p. 146-7.

† *Development of Modern Philosophy*, vol. ii, p. 290.

‡ *Mind*, xii, p. 368 *sqq.*

accompany the execution of movement can scarcely be over-rated in any attempt to trace the development from their earliest beginnings of those complicated phenomena of strain or effort that come forward most prominently when the will has been definitely formed and when control is exercised over trains of conceptual ideas. Even within the sphere of what is often called purely perceptive experience,—and by that, according to the view I am here taking, we can only mean such experience as involves a relatively small amount of discrimination,—the muscular activity of the body gradually comes to be connected with the self, and whatever resists the exercise of muscular activity comes to be regarded as relatively external and objective. Neither thinking nor willing, in the strict sense of the terms, can make its appearance in the mental life until these motor factors have become closely connected on the one hand with the permanent groups of ideas and feelings constituting the self in the more advanced stages of its development and on the other hand with the representations of anticipatory changes which the self is then able to form.

The gradual introduction of the more subtle distinction between the self and the bodily organism must again be the result of a variety of circumstances all of which, could we trace them, would be of moment in throwing light upon the psychological genesis of the reflective or mediate character ascribed to the products of thought. Evidently the apprehension of the inner self as distinct from the body involves as a precondition the possibility of definitely recognising the contrast between representation and presentation, between idea of imagination and percept. Evidently, too, it involves the possibility of combining sense-presentations on the one hand and ideas of imagination on the other each into a unified series or group, so that whilst the latter may attach itself to the inner core of feelings and corporeal activities already referred to, and thus constitute part at least of what the subject comes to regard as its own mental life, the former, in contradistinction thereto,

may come to be regarded as the appearance or manifestation of the objective world of fact.*

Thinking, in the strict sense of the word, we should habitually describe as voluntary activity; in thinking, I am not only active but am aware of myself as active. The problem that meets us here is essentially the same in kind as that which we encounter in reference to the voluntary execution or control of bodily movements. So soon as there has been established a definite separation in the mental life between trains of sense-presentations, feelings, and ideas, more or less habitual, and forming the individual self, and the transitory presentations and feelings which come and go, so soon as this consciousness of self has obtained a certain stability and fixedness, there is rendered possible that peculiar mode of discriminative apprehension which is dependent upon selection among a number of motives and upon forming ideas beforehand of changes to be effected. I allude here only to one point often lost sight of in psychological discussions of the problem. Whether the attitude of the subject be that which we denote as the initiation or as the control of movement, in both cases he is in total ignorance of the mechanism by means of which the actual movement is either brought about or restrained.† The mechanism of movement is at all events not worked by him in any such fashion as that in which a concrete individual may set in motion or stop a piece of apparatus the parts of which lie before him at his disposal, and no analogy could well be less appropriate than that between the relation of the operator to the movements of his machine and the relation of the conscious subject to the movements of his body. Bodily movements, however voluntary, come about as natural facts, and in consequence of strictly natural laws; the subject is in no way concerned in devising the conditions of their possibility. For him they are groups of motor presentations and the feelings

* *Cp. Adamson, Op. cit., vol. ii, p. 290.*

† *Cp. Lotze, Medicinische Psychologia, pp. 287 sqq.*

in conjunction therewith—groups which become connected in his inner life with presentations and representations other than motor. The conscious control or direction of bodily movement must therefore depend upon the establishment of empirical correlations between certain phases of the inner life and certain states of the bodily mechanism. Just as in mature experience we can repress an emotion by inhibiting the physical movement through which such emotion finds manifestation, so in general we can restrain bodily movements by dwelling upon presentations or representations which involve as part of their content the cessation of such movements. Primarily, therefore, it is the process of Attention that lies at the root of any control we can exercise over bodily movement. And precisely the same process is involved in the control we exercise over a train of thought. Now, as already indicated, it is perfectly possible, and I believe psychologically imperative upon us, to offer an explanation of the phenomena of Attention by connecting the process of Attending with the fundamental function of apprehension, the act namely of discriminating, of recognising differences and likenesses. When we consider that all sense-presentations, through the mere fact of their bodily origin, are naturally conjoined with motor presentations, that those sense-presentations which are conjoined with motor experiences related to the continuance of pleasure or the removal of pain will attain relatively the largest place in consciousness, that motor experiences connect themselves from the first with those permanent groups of presentations and feelings which gradually come to constitute the self, that the rise into consciousness of the distinction between self and not-self coincides for the most part with the gradual formation of the individual will, and that the conditions involved in the formation of the individual will are very largely the experiences connected with the movements of the body, we can, I think, understand to some extent, how it should come about that with the

phenomena of Attention in its higher forms there should be associated those experiences of strain or of effort so familiar in the exercise of thinking in the strict sense of the term.

In the light of what has been said, there seems to be no insuperable difficulty in accounting for the fact that to the developed mind act and content do appear to be sharply distinguishable. If the discriminative activity involved in having the simplest sense-content is the same in kind as that involved in apprehension of a content of greatest complexity, if its procedure, whatever be the nature or variety of the contents discriminated, has a general similarity of character throughout, there is furnished by that circumstance alone an intelligible ground for the separation prominent enough in our mature experience.

Our apprehension of things tends, then, as mind develops to become less and less immediate and direct. The contents of our knowledge tend gradually to wear the aspect of an inward possession, almost of an instrument wherewith we may proceed perceptively to interpret the world to be known. Our thoughts seem to withdraw themselves further and further from the sensuous occasions of perceiving, and to be more and more the outcome of a purely subjective activity. This subjectivity, however, is very different from that which we have had before us at various stages of our inquiry. It is by no means inconsistent with the pre-eminently objective character of thought. It is a consequence of the formation in us of a permanent consciousness of self and of the ways whereby the consciousness of self obtains definiteness and distinctness in our mental life. But such consciousness does not spring up *de novo* from some hidden depths of our being; it develops along parallel lines and contemporaneously with our consciousness of the external world, and it would be deprived of all content and meaning apart from the latter.

(ii) *The Generality of Thought.*—I notice, in the second place, certain characteristics of the generality usually ascribed

to the products of thought. Roughly, generalisation may be said to be based upon the process of selecting a mark or feature, or combination of marks or features, and liberating it from other marks or features with which it has been presented in experience. Generalisation, in other words, is reached through means of abstraction, and by abstraction the content of any perception or imagination is freed from a variety of accidental or temporary concomitants and dwelt upon for itself apart from these. Generalisation is certainly not exhausted in the act of abstracting. For the present, however, we can confine ourselves to the latter. It implies the possibility of retaining and comparing presented contents: an inner life which had before it a mere stream of given contents, of presentations and their images, could never advance to the stage of isolating any aspect, quality or relation from the whole in which it had originally made its appearance. For whatever else may be given, it is clear that one content's difference from another cannot be given in that content, and without some recognition of difference the initial step in the liberation just referred to could never be taken. In our ordinary experience no content can be recognised as in any way different from another without thereby becoming to a certain extent generalised,—loosened, that is to say, from some of the numerous details with which it had been originally apprehended; and every feature, thus detached from the content, and released from the limitations imposed upon it, acquires by that very fact a new significance.

Many psychologists have emphasised the truth that the process of abstraction must be operative throughout conscious experience, and that alike in its primitive and in its higher forms the process is in essence the same. Hamilton, for example, insists that a natural basis of abstraction may be found in the simplest cases of self-apprehension.* Adamson,

* *Lectures on Metaphysics*, xxxiv.

on the other hand, finds the natural basis of abstraction in the capacity for reviving in idea what has been presented through sense-perception,—a capacity which must be accepted as ultimate, and in respect of which a psychological explanation cannot be offered. No content, he points out, is ever revived with all the detail it possessed on its original appearance. Some mutilation, some deprivation of those features which went along with its primary presentation it must have undergone, if only because it is now apprehended in a different setting and in changed surroundings; to a certain extent it will be severed from the *temporal* conditions of its original appearance.* And, as Mr. Bradley observes, there is every reason for supposing that the lower we descend in the scale of animate nature, the more typical, the less distinct, the more vaguely universal will be the deposit of experience.† Gradually, then, through repetition of experiences more or less identical in character, and through the emphasis imparted to such identity by revived presentations disengaged from varying features which belonged to them as at first presented, the primitive mind would have at its disposal a stock of images which may not inappropriately be called generic,—images, that is, which, whilst representing characteristics of an indefinite number of particulars, are not precisely copies of any one of them. In some such way we may conceive of the “pre-logical” stage in the development of cognition. Doubtless the process I have briefly indicated is to a large extent mechanical, but it is not mechanical in the sense that it could proceed a single step without involving that function of discriminating and comparing, which we have insisted it is an error to suppose only comes into operation when presentations, already with definiteness and precision of outline, are compared and related one to another by a deliberate act of reflection.

It is not, of course, suggested that the transition from the

* Adamson, *Op. cit.*, vol. ii, p. 294. † *Principles of Logic*, p. 39.

one stage of consciousness to the other is by any manner of means easy to retrace. No minimising of the difficulty involved in trying to recover the links of connection that unite the reflective with the primitive mind is implied in the contention that what separates the thinking consciousness from the rudimentary consciousness is not so much what one may call formal differences in the activity of apprehending as material differences in the content apprehended, the latter being dependent on the alteration which is brought about through the gradual development of the inner life. From the apprehension of different presentations to the apprehension of the differences *qua* differences, from the apprehension of related facts to the apprehension of the relations as distinct from the related facts, is probably the most tremendous stride that comes before us in the history of mind, but I believe it can be shown psychologically to be perfectly compatible with the course of mental evolution, without resort, after the manner of Lotze, to the hypothesis of a specific faculty of relating. Were we justified in assuming that *before* this distinction had been effected presentations and their images were themselves apprehended as completely formed and separate individuals in the way in which they are apprehended *after* the distinction has been established, then I admit it would be futile to seek for any continuous line of development from the one grade of consciousness to the other. But the relinquishment of Atomism in psychology ought to carry with it acceptance of the view that the definite individuality, the independence, which in mature experience is assigned to presentations and their images, is itself a result of the recognition of relations as relations and would be impossible without it.

If, then, it be asked what conditions are involved in separating the differences from the contents that differ, in concentrating attention upon the relations apart from the contents related, the reply is, in the first place, precisely those which have been indicated as involved in the formation of that

recognition of unity which is denoted by the term self-consciousness. In fact, consciousness of self and apprehension of relations among the parts of presentative experience must be conceived as coming about *pari passu*; the one is not without the other. A concrete example will perhaps serve to illustrate my meaning. It is, as Dr. Ward very truly remarks, "a long step" from a "succession of presentations" to a "presentation of succession," and Lotze, too, dwells upon this antithesis as furnishing support for his own theory of a specific relating faculty. And, when the problem is formulated in that way there does seem to be a *prima facie* case for Lotze's position. For we immediately interpret the phrase a "succession of presentations" in the ordinary popular sense; we imagine the presentations A, B, C each as an apprehended content complete and distinct in itself, and then there seems to be no way of escaping the inference that the idea of succession must necessarily be imposed upon them from an independent source. But if our isolation of A, B, C is itself a result,—in part, at all events,—of our applying to them the idea of succession, then it is clearly a *ὑστερον πρότερον* to assume such isolation as one of the data of the problem. On any supposition, however, the expression referred to is an inadequate mode of representing to ourselves the total experience out of which we, even in mature reflection, arrive at the judgment "B follows A and C follows B." The situation is this. The presentations A, B, C appear in a whole complex of presentations and images, they are referred to the unity of the apprehending subject, they are attended to through a complicated process of discrimination and comparison, and although there is nothing in the content either of A or B or C to indicate that one is in a relation of sequence to the other, there may well be amongst the totality of the concomitants of each of them just those factors which enable us to recognise a relation of temporal sequence. Each of the presentations in question will be apprehended in connection with that group of perceptions,

feelings and ideas, constituting the self,—a group, which, although as a whole relatively permanent, is yet also in the midst of constant change. The way, therefore, in which C stands to this identical factor will be different from the way in which B stood to it, and again from the way in which A stood to it, and we have thus data furnished on which the judgment of succession may be based. I do not pursue the analysis further; we are certainly not in a position to lay out anything like exhaustively the psychological factors involved. But enough has been said to indicate the extraordinarily complicated set of circumstances implied in even one of the simplest ideas of relation habitually employed by a thinking mind.

It may not be out of place to point out here that if this way of looking at the matter be the correct one, it defines our attitude towards a well-worn philosophical doctrine. T. H. Green's favourite Kantian dictum that "thought constitutes relations" expresses at the best only a half truth, and, at the worst, a positive error. What has been said would lead us rather to violently reverse the dictum and to insist that "relations constitute thought." Neither mode of statement is a happy one. What we do, however, need to realise is on the one hand that reflective thinking is only possible when relations have come to be recognised as relations, and on the other that we are not entitled to assert that such recognition is a necessary pre-condition of perceptive experience.

Were we attempting to give anything like a systematic account of the process of abstraction, it would of course be necessary to refer to the all important function discharged in our thinking by language and the use of signs. It would be wellnigh impossible to preserve the generalised contents of conceptual thinking without the establishment of associations between them and particular empirical facts which serve to retain them at our command. In one respect, signs are themselves the outcome of abstraction,—although particular

empirical facts they are liberated from accidental features which would tie them down to this or that special circumstance of our experience; in another respect, they are the indispensable auxiliaries of our abstract thinking,—they serve to make abstract ideas concrete by connecting them with the particular objects around us. Further, a word or symbol gives to the content symbolised a definiteness and independence, that at once constitutes a contrast between it and the series of particular presentations on which the conception of it was based. A perception yields us a content with a complex of characteristics, such as were only to be found at one particular time and under one particular set of conditions. A name or symbol never suggests all the detail of the perceived object, but calls up what rightly or wrongly we have taken to be its essential nature, and what we tend to regard as remaining the same amid a variety of unessential concomitants. And, on that account alone, remembered facts tend to lose very largely their concrete character: we recall and depict to ourselves facts and events more by means of words than by means of concrete imagery.

Partly for this reason, one would be inclined to reject the view that there must always be present in the mind when we employ ideas or general notions a mental image or picture of some kind from which the idea is abstracted. One might indeed question whether we ever have before us in reflective thinking images that could possibly be called individual or particular. The immense variety in the contents of our thought,—a variety due not merely to differences in the power of abstraction but to the manifold nature of what may be object of contemplation,—renders it probable that it depends largely upon the nature of the matter under consideration whether there will be much or little or no imagery involved in our thinking. If the objects of our thought be concrete and particular, then doubtless we shall have before us a relatively large amount of representative imagery. Such

imagery may take the form of a sort of typical instance, or of a rapid succession of different instances each possessing some special features, or of representations in vague indefinite fashion of some of the marks or attributes of the things about which we are thinking. But in all such cases, the images would be no more mental states or events, they would be as truly "meanings," however vaguely they might be apprehended, as the ideas conceived by their help. If, on the other hand, the objects of our reflection be abstract or general in character, then probably representative imagery will be reduced to a minimum or be entirely absent. That we are able to apprehend abstract relations at all, to attend to some features of a thing and not to others, is in itself quite sufficient ground to warrant the assertion that in thinking we need not necessarily have before us any concrete mental picture.

(iii) *The Objectivity of Thought*.—Abstraction, we have said, is only one phase of generalisation. "The concept," as Nettleship puts it, "is not *made* general by being abstracted, its generality *means* its capability of being abstracted."* A concept or general notion is certainly very much more than a merely attenuated or impoverished particular, very much more than a "wandering adjective" divorced from the content of a mental image. Were it no more, what Mr. Bradley describes as thought's chief characteristic,—its invariable reference to an objective connection in the real world,—would be inexplicable. Let us look for a moment at this characteristic. Thinking seems to stand, so to speak, aloof from the mechanical order in which our presentations and representations happen to come and go; the principles according to which valid thinking is conditioned are not the laws according to which occurrences take place in the mental life. The content of thought refers to that, which in Lotze's phraseology, has its being and meaning in itself, and which continues to be

* *Philosophical Lectures and Remains*, vol. i, p. 220.

what it is and to mean what it means, whether we are conscious of it or no.

So long as the old method of distinguishing Thinking from Perceiving,—by the help, namely, of the opposition between general, in the sense of abstract, and individual, in the sense of concrete,—is adhered to, it must be confessed that the characteristic of Thought just indicated raises an awkward psychological problem. How should we account for the fact that precisely those contents of apprehension which ought to bear upon them the very stamp of subjectivity should somehow exhibit the most decided reference to that which is not subjective? Let it, however, be granted that, in the history of mind, we start with vague, indefinite, crudely differentiated contents, that what comes first in experience can be described neither as general, if by that we mean the generality ascribed to concepts or judgments, nor yet as individual, if by that we mean the individuality ascribed to the concrete objects of our mature perception, then it would seem to follow that progress in knowledge ought to be conceived as taking place along two lines of advance, which need not by any means be diverging from one another, but may well be tending towards a common goal. A psychological examination of the activity of knowing would yield abundant evidence of the soundness of this position. No apprehending mind ever rests content with a bare abstract generality. Each generality acquired enables the relatively indefinite experience from amid which it has been gathered to be viewed as a group of more determinate individual facts, these facts are at the same time disengaged from masses of irrelevant surroundings, and thus gradually come to stand out, as it were, in well-defined relief against a background whose parts form a confused and ill-differentiated whole. Each individual fact, thereby rendered determinate, is apprehended as sharing in features common to, participated in by, other individual facts, which latter facts in their turn are thus increasingly individualised and differentiated from one

another. The child mind that has extracted from some fact of perceptive experience, say a chair, the elementary idea of hardness, never keeps this quality floating in the air, but forthwith proceeds to find it in as many other facts as possible. By a series of rudimentary judgments, the vague objects from which the child mind starts are seen to have general characteristics, and the larger the number of such characteristics recognised, the less vague, the more individual, do the objects of its experience become. And, conversely, the larger the number of objects to which a general characteristic is ascribed, and the greater the amount of difference they are otherwise seen to possess, so much the more definite and distinct does the general characteristic itself become. The child's first apprehension of a general notion is certainly no less vague than his first apprehension of a particular object; only by slow degrees does its essential meaning gradually begin to appear. And what is true in this respect of knowledge in its earlier stages is likewise true, *mutatis mutandis*, of knowledge in all its stages. Every great scientific generalisation carries with it a more accurate and definite individualising of the particulars in which it finds exemplification. If Newton abstracted from the particular phenomenon of a falling apple the law of universal gravitation, the falling apple must immediately have become transformed for him into a much more pronounced and distinctive individuality than it had ever been before. By discerning in it an identity with all other moving bodies, he was at the same time determining with greater precision its points of difference from them. Knowledge, then, advancing by a series of judgments, exhibits a two-fold progress, on the one hand analytical, and on the other synthetical,—on the one hand, an ever-increasing number of recognised distinctions, on the other, an ever-increasing richness and fulness of the individual concrete objects into which the whole has been differentiated. "It is not," as T. H. Green puts it, "that there is first analysis and then synthesis, or *vice versa*, but that in and with the putting

together of experiences, the world before us, which is *for us* to begin with confusedly everything and definitely nothing, is resolved into distinctness; or, conversely, that as resolved into distinctness, it assumes definite features which can be combined."*

When, in the light of these considerations, we turn to the problem of the objective character of Thought, we find ourselves relieved of at least one perplexity that has baffled many of those who have attempted its solution. We have no longer to account for the "objectification of the subjective"; that which in thinking we recognise as objective is not something which had a prior mode of appearance as subjective. The objectivity of Thought implies no sudden introduction of a new factor into conscious experience. It implies rather the explicit unfolding of what was implicitly involved in the more elementary processes of mind, those processes, already alluded to, whereby apprehension of the difference between self and not-self, inner experience and outer world of reality, gradually took its rise. If, with Adamson, we fix upon extendedness as that feature in the contents of primitive apprehension which furnished the earliest basis of the experience of the objective,† then it must not be assumed that such recognition of a quantitative extensity originally emerged from what at first was mere qualitative intensity. Our mode of expressing an ultimate distinction labours unavoidably under the disadvantage of making it appear as though one member of the distinction preceded the other,—in this case, as though the subject's recognition of its own character as purely psychical and qualitative preceded its recognition of quantitative extension on the part of the object. But if what we understand by qualitative intensity attained its peculiar meaning only in antithesis to, in contrast with quantitative

* *Works of T. H. Green*, vol. ii, p. 193.

† *Op. cit.*, vol. i, p. 291 *sqq.*

extendedness, then the latter can by no means be regarded as logically posterior to the former, and, in however dim and crude a fashion, the opposing characteristics of extendedness and non-extendedness must have arisen in consciousness together. Starting, then, with this antithesis and taking account of that development in the mental life which later enables a distinction to be drawn between the direct immediate experience of perception and the indirect mediate experience of reflective thinking, we can represent to ourselves, in a general way, how it comes about that, whilst on the one hand the contents of thought acquire more and more the character of generality, they should yet, on the other, retain throughout that objective significance, the earlier and cruder manifestation of which was a feature in primitive perceptive experience. For the generalising and comparative work of thought will always appear to have space perception as its basis, as that on which its discriminating and reflective activity is directed. From first to last its distinctions will be made and its comparisons instituted between features in the objective sphere, so that there will be no reason why it should not, but every reason why it should, represent the laws of dependence amongst individual facts as being in no way less real than the individual facts which exemplify them. Even that highly specialised mode of reflective thinking which makes the inner life itself an object of contemplation can only be carried out in so far as that inner life is conceived as related to, and in intimate connection with, the world of extended things in space.

One other circumstance may be mentioned as contributing to the same result. In conceptual thinking, even though attention be strenuously exercised, there is a relatively small proportion of personal feeling. And this for two reasons. In the first place, as thinking tends to dwell more and more in the region of generalities, it will liberate itself no less from the concomitants of individual feeling than from the accidental

concomitants of presentation. And in the second place, the explicit reference to the objective connections of what is signified by the contents of its reflections will tend to concentrate interest on those objective connections to the exclusion of mere personal interest.

7. THOUGHT AND REALITY.

Is, then, we may fitly ask in conclusion, the claim to objective significance which the contents of our thinking carry with them one that can stand the test of critical examination? Have we any reason for supposing either from the character of the thought process itself, or from the mode of its development, that the interpretation of reality which through the exercise of reflective thinking the human mind is gradually attaining, not merely falls short of expressing the full meaning of that reality, but so misrepresents it that it must for ever escape our grasp?

As in previous cases, we may draw out our answer to this question by criticising at first another answer. In Mr. Bradley's view, thought, as the interpreter of reality, suffers from an incurable limitation, inherent, so to speak, in its very nature. Briefly, that limitation arises from the fact that thought is from beginning to end discursive in character,—it never succeeds in surmounting the distinctions in instituting which its procedure consists. Mr. Bradley does not, of course, ignore the synthesis involved in an act of judgment: it is indeed the cardinal feature of his doctrine that in judging we re-unite a "what" and a "that," which have been provisionally estranged. But the synthesis or reunion of the distinguished implies, notwithstanding, a "separation, which, though it is over-ridden, is never unmade." In the midst of its synthetic function, in the act, namely, of attributing a quality to reality, thought has to consent to a partial abnegation. "It has to recognise the division of the 'what' from the 'that,' and it cannot so join these aspects as to get

rid of mere ideas and arrive at actual reality." Even when the judgment is complete, the divorced elements never are restored to solid unity.*

If we start as Mr. Bradley does with a sensuous *datum*, assumed to be experienced in some unique way, in some way, that is to say, absolutely different from that in which the facts of the objective world are or can be apprehended by us, and if that unique experience furnishes the only hold we can secure on reality, then it follows inevitably that an attempt to reach a reality beyond is doomed, from the necessity of the case, to at least the degree of disability indicated in the above quotations. The only question one could raise would be whether its disability is not of a much more serious kind. For observe how we stand. Our mental life consists of psychical states or events, each possessed of two aspects, existence and content, the content being the complex of qualities and relations constituting the character of the existence. These psychical states are our data; their occurrence is our experiencing; in their case reality (or such degree of reality as belongs to them) and experience are one and the same. So far there is no thought and no logical judgment. But certain of these psychical states, *qua* existences, are signs of an immediate relation to, a direct encounter with, a reality beyond themselves. In sense-presentation we are in actual contact with this reality, but such contact in itself only assures us that the reality is and not what it is. By means of the judgment we qualify, interpret, impart meaning to the signified real. And we are enabled to do so, because the psychical state, which *qua* existence is in contact with the presented reality, is *qua* content a mental image, part of which can be used ideally and referred to that which is beyond itself. The subject of the judgment is the signified real, the predicate a portion of the content of the mental image, abstracted from the rest, fixed by the mind as a

* *Appearance and Reality*, chapter xv.

universal, and attached to the signified real. It is, then, clear why the unification involved in an act of judgment never can present us with a concrete reality, such as that which has been mutilated in order that the act of judging should take place. The subject of the judgment cannot own its predicate in the same way as the mental image owned its content, and that for two reasons. In the first place, it is a different existent from the mental image and its content, therefore, must be different from the content of the mental image; and, in the second place, a fragment of content torn from its particular setting in one context has not thereby been fitted, by being deprived of its clothing* for transportation into another context, "to live on strange soils, under other skies, and through changing seasons." But these do not exhaust the difficulties of the situation. Consider again the subject of the judgment. It is a "reality beyond the act," which the thinking mind encounters directly in sense-presentation. Yet that alone which the thinking mind can immediately experience, according to the view of "immediate experience" adopted by Mr. Bradley, will be the result of the encounter; that there has been an encounter, that the encounter signifies a reality beyond the act, that the reality beyond the act is continuous with the present sensation, and that it is of such a character as to permit the ascription to it of an ideal content,—all this may be true, but, in any case, is something of which the thinking subject can only become aware by judging, and, instead of guaranteeing the validity of judgment, itself presupposes such validity. Consider, once more, the predicate. It is an adjective, a meaning, a universal idea, and its universality consists in its being cut loose from its own existence and referred to a reality beyond. How, then, are we to account for this reference, and how are we to justify it? We have seen, at an earlier stage of our inquiry, how Mr. Bradley would answer the first part of the question.

* Cp. *Principles of Logic*, p. 9.

"Facts," he insists, "which are not ideal and which show no looseness of content from existence, seem hardly actual."* And by way of explanation we are reminded that given fact "changes in our hands," and "compels us to perceive inconsistency of content." Consequently, "this content cannot be referred merely to its given 'that' but is forced beyond it, and is made to qualify something outside." But, why should changes in given fact be perceived as inconsistency of content? Awareness of inconsistency involves surely some sort of idea of the demands of consistency and that the merely sentient mind is *ae hypothesi* not in a position to attain. In other words, the loosening of content from existence presupposes the objective reference of thought, and cannot, therefore, be assumed in order to account for its emergence. And even were it otherwise, it would still require to be shown on what grounds we are entitled to use an adjective abstracted from a psychological state to qualify an existence outside of it. For in the first place, granted that the psychological state is a sign, we can never be sure that it is a sign of the right meaning. And in the second place, if we take the immediate experience of a psychological state as our criterion of reality, then to dismember this reality which is immediately experienced and to use one of the *disjecta membra* to qualify the reality which is not immediately experienced seems to contradict in violent fashion the assumed criterion. As a "wandering adjective" the idea could no longer qualify so much as the psychological state, and its radical incapacity in this respect can hardly establish its claim to qualify that which lies beyond. Accordingly, the conclusion appears to be inevitable that the procedure of thinking has set out on the wrong track; that in attempting to reach reality, it is getting farther and farther away from it and that the more we think about the world, the less we know about it.

Thought, then, on this view of it, seems condemned to be confronted for ever by its own insoluble problem. The pathway to objective knowledge, to knowledge of the real world of fact, has been foreclosed at the outset by masses of psychical material which block up the mind's every way of exit to the realm of nature. No amount of manipulation of a mental state will make it more than a mental state, or constitute the "idea" that results therefrom into anything other than an attenuated mental image. In short, if we treat mental states not simply as modes of experiencing but as data experienced, they will possess the entire field, and thought will be no more able than sense to transcend them.

We have here before us the large problem of the validity of judgment, and I propose only to indicate briefly the way in which the line of reflection we have been pursuing has bearing upon it. That perhaps can best be done by bringing together for comparison the three different significations which the term "subjective" may possess when applied to thinking and its products.

The first of these we have been encountering in one form or another throughout the foregoing discussion, and it is prominent in the theory of judgment we have just been considering. Thought is subjective because besides being itself an activity of mind, the material from which it takes its departure is also psychical, because although the ideas which it employs are not psychical existences, they are yet abstracted from particular facts or events which are psychical existences, and can therefore never lose the mental colouring that saturates them from the start. If thought converts the "degradation" of psychical events to its "ideal uses," yet "it builds its own world out of them," and there is no escaping the conclusion that its world *may* be not only a "beggary show" as contrasted with the real world, but a wretched and delusive caricature of the latter. In short, on these premisses, absolute scepticism can entrench itself with a security that is proof against any and every kind of

attack.* Now, we have seen reason for holding that neither sense-presentation nor thought is subjective in this sense. Sense-presentations, as we have been regarding them, are no more affections or modifications of the individual mind, no more constituent parts of the mind's existent nature, than the most exalted idea ever framed. They are not bits of consciousness, not pieces of mental fact; from the outset, they are qualities which the mind discriminates in the reality that confronts it, such aspects of the real world as its powers of discriminating enable it to apprehend.

If the view we are defending be correct, it is misleading to say that the reference of an idea to reality is first introduced by the judgment, or that in the subject of a judgment there is an element of existence which is absent from the predicate. Both the subject and the predicate of a judgment are contents of apprehension, each is a discriminated aspect of the real. If the judgment be an assertion about some concrete fact, then its subject is the representation in the form of content of that concrete fact from which the person judging starts. He may, of course, take some feature of that content and predicate it of the subject, but in that case his judgment will be analytic, and will not advance his knowledge. Every synthetic judgment, on the other hand, will add a characteristic to the content from which he starts: it will thus transform for him the concrete fact, and enrich it by a new determination. In either case, the predicate will be an "idea," abstracted not from a mental event but from contents representative of objective reality. As Dr. Bosanquet puts it, although he seems often to depart from his dictum, "there is in knowledge no passage from subjective to objective, but only development of the objective." No doubt in every judgment the "idea" is held suspended in thought before it is predicated of the

* *Op. Mr. Carr's paper on "The Metaphysical Criterion and its Implications," in the last volume of the *Proceedings*.*

subject. Such "division" of predicate from subject is not, however, the essence of an act of judgment. There is no judgment until the two are brought into connection, until there is a putting into one of two contents, a *σύνθεσις νοημάτων*, in Aristotle's phraseology.

In regard to a second signification of the term "subjective," the attitude we have taken has been of another kind. We have admitted, as, indeed, under any supposition must be admitted, that in one sense both thinking and perceiving are subjective. Even were we anxious to maintain that things exactly correspond with the ordinary popular conception of them, that they are known in their real relations by the finite minds apprehensive of them, it would still be the case that such knowing on the part of the subject would be subjective in the sense of being an act or process of the mind itself. There could be no knowledge without that antithesis between knowing and the known; even omniscient knowledge could not transcend it, for it is implied in the very notion of knowledge. To demand of knowledge that it shall be one with the object known is tantamount to demanding that knowledge shall both be and not be knowledge. But "does it not seem absurd to say, that by interposition of mind, by which alone knowledge is possible, knowledge is at the same time impossible? What alone renders something possible, alone renders it impossible! I know, but because I know, I do not know! I see, but because I see, I do not see! Is it a fact, then, that because both—subject and object—are present in cognition, the one must be destroyed by the other, and not that cognition may be made true, but that it may be made false? In a word, is it not worth while to consider the whole antithesis: an object is known because there is a subject to know it; an object is *not* known because there is a subject to know it."* The consideration here suggested

* J. H. Stirling, Annotations to Schwegeler's *History of Philosophy*, pp. 391-2.

is one that may be approached from many sides; we have come to it along the road of psychological inquiry. And unless our inquiry has been wholly misdirected, we have obtained a result of no small importance with respect to the antithesis thus propounded. For we are now in a position to assert that the subjectivity which is of necessity implied in all knowledge, inasmuch as knowledge is dependent on the activity of a knowing mind, has not in itself a vitiating influence upon the knowledge it is the means of obtaining. The activity of knowing throws no colour of its own upon that representation of the world of fact which through it is possible, simply because it has no colour of its own to throw. In essence, it is throughout a process of discriminating, comparing and relating; and there is nothing in such a process that need of necessity distort or falsify the contents which thus come into recognition. As an activity of this kind, it cannot itself get in the way of that which it discriminates, compares and relates; it gives no *form*, in the Kantian sense, no portion of its own being to the contents that in and through it make their appearance. Accordingly, scepticism must relinquish the general ground it is enabled to occupy so long as subjectivity is interpreted in the way we have previously noticed, and, if it is to obtain a foothold at all, must depend upon the strength of the case it can make out for distrusting knowledge on account of the difficulty of discriminating, comparing and relating the manifold and complex objects upon which the mind's activity is directed. This, however, implies a complete change of front so far as the sceptical argument is concerned; it is no longer the inherent nature of knowledge, as such, but the imperfection due to our limited powers of knowing, that is the rock of offence,—an imperfection which the growth and expansion of those powers will gradually tend to overcome.

Subjectivity has yet a third significance with reference more pecifically to the process of thinking, a significance the basis of which I have tried to exhibit in dealing with the

characteristics of thought as contrasted with sense-perception. We have seen how the contents of acquired knowledge gradually come to be conceived as the property of the self, which, in mature experience, we are able to make an object of our contemplation. The self is regarded as possessing a body of knowledge, as having at its disposal a whole storehouse of notions and categories wherewith to arrange and interpret the details of experience. In receding from sense-perception to ideas of imagination and concepts of discursive thinking, we seem to be withdrawing from the real world of fact into an inner world of our own construction, and the question inevitably arises whether the formation of the latter does not in turn distract and pervert our view of the former. In other words, is not the direct and immediate apprehension of an unreflective mind more likely faithfully to discriminate the features of reality than the apprehension of a mind that brings to the task a host of ideas and thoughts with which to interpret what is actually presented in sense-experience? The characteristic of fact, it may be said, is its concreteness, whilst the characteristic of our ideas and concepts is their universality. In the order of fact, it may be urged, the parts seem to be connected through the relatively external relations of co-existence and sequence, whilst in the order of thought, ideas and concepts are connected through the relations of logical dependence. Does it not follow, then, that our thought proceeds after a fashion of its own and that it imposes on the materials furnished to it forms that are entirely peculiar to itself? Undoubtedly this conclusion would be difficult to resist on the assumption that thought is a "fundamentally distinct mental function" which operates upon presentations given to it by means of another "fundamentally distinct mental function." But if that assumption be, as we have contended, unwarranted, if the process of thinking be, in truth, a development from the more primitive process of sense apprehension and continuous with it in

nature, then we are entitled to answer the question just propounded with a decided negative. We are entitled to point out that universality is not a feature abruptly introduced into the contents of apprehension when we begin to contemplate them reflectively, that, on the contrary, it is implicitly involved in the crude presentations of the rudimentary consciousness, and that so soon as a perceived object is regarded as having a permanent existence of its own, and as being common to a number of percipient minds, the qualities discriminated in it are tacitly recognised as universal. Universality, therefore, instead of being a form of our individual thinking, is a characteristic which we discover in all the materials with which our modes of apprehension are concerned. And so, too, with reference to the relations of logical dependence. They are in no sense accidents due to the particular mechanism of thinking on the part of finite subjects. It is perfectly true that those relations which we represent by means of judgments and syllogisms are not to be regarded as precise copies or counterparts of relations that subsist in the world of real fact. But in the first place, we never, in our thinking, assume any such literal correspondence; thought never claims for its relations of logical dependence that they are more than generalised representations of those modes of systematic connectedness which we gradually come to discover in reality as a whole. And, in the second place, our activity of thinking is not some miraculous function suddenly transported into a world alien to it; it has itself originated and developed as part of that world; its growth has been throughout conditioned and determined by the very material upon which in turn it comes to be exercised, and which we have no ground whatever for supposing has been engaged in the strange freak of so shaping the discriminative process as to convert it into a mechanism for distorting and defiling that which fashioned it. The categories of thought, then, are not mere forms invented by capricious finite minds; they are contents with the aid of which reality

becomes intelligible to finite minds, and which finite minds have been constrained to elaborate by the reality thus rendered intelligible. Subjectivity, therefore, in the sense we are now using the term, offers no inherent obstacle to the attainment of objective truth. And generally, it may be said, that a similar line of argument is relevant in regard to the influence of what is sometimes called the "personal equation" upon our intellectual representations of things. As the gradual result of development, the finite subject does, no doubt, reach a consciousness of self that has a pronounced and definite character of its own; and, in consequence, his apprehension of what is other than self will to a certain extent bear upon it the stamp of his particular individuality. "Strata upon strata, from acquired habit, through deep-seated hereditary instincts down to the vital energies of the body, lie beneath the clearer, thinner atmosphere of thinking, and he is a poor psychologist who does not recognise the enduring influence of these lower layers.* Yet, in this connection, it is in the first place again to be remembered that the individual self-consciousness is not, so far as any of its instincts or interests are concerned, a lawless or an unaccountable factor in the scheme of things, but has itself grown up and developed through participation in the world of real fact, apart from which it would have no instincts or interests at all; and it is to be observed, in the second place, that the advance of knowledge largely consists in eliminating and correcting the errors that arise through the idiosyncrasies of this or that knowing mind.

Philosophical reflexion is, at the present day, face to face with an antithesis, the importance of which is only by degrees beginning to be realised. On the one hand, the assumption that "immediate experience" or sentience is the one and only hold we possess on reality leads by easy steps to the position of Mach,

* Adamson, *Moral Theory and Practice*, in the volume *Ethical Democracy*, p. 241.

and in large measure also of Avenarius, that the activity of thinking has no other function to discharge than that of enabling us to arrange and systematise, in as simple and "economical" a way as possible what is thus "given" directly through sense. So regarded, thoughts or notions have only significance in so far as they subserve this purpose of "economy"; the concepts of science become mere signs or symbols, useful for reducing the multiplicity of sensuous experience to some kind of manageable order, but utterly misleading if they are supposed to represent anything actual in the universe of being. On the other hand, the rejection of the assumption in question need not by any means imply that thinking is to be identified with the structure of reality, or even that the products of thought are forthwith to be taken as strictly accurate representations of the real world of fact. But it does imply that the reflective scientific interpretation of nature is infinitely nearer the truth of things than the crude, uncritical discriminations of the ordinary consciousness. It does imply that Hegel's splendid confidence in reason was not unjustified, although the justification rests on other grounds than those upon which he reposed it. "There is," to use Adamson's weighty words, "a contradiction in supposing that thought—which is but the methodised fashion of reaching self-consciousness, of defining, therefore, in their relation to one another the parts of reality within our experience—should by its own nature be incapable of solving problems which it must put to itself, even although, as a continuous process, it has still much to achieve."

X.—NEO-KANTISM AS REPRESENTED BY
DR. DAWES HICKS.

By G. F. STOUT.

OF the "Kritik of Pure Reason," as of the Bible, we may truly say :—

"Hic liber est in quo quaerit sua dogmata quisque :
Invenit et pariter dogmata quisque sua."

Dr. Hicks is one of many who have extracted or distilled from Kant a philosophical doctrine which appears to them to satisfy their own requirements. It is with the views which he derives from Kant and adopts as his own that I am concerned in the present paper. I do not propose to call in question his interpretation of Kant's meaning. When I attribute certain views to Kant, it must be understood that I am referring to Kant in that version of his Philosophy which finds acceptance with Dr. Hicks.

There are two main topics which interest me :—(1) The distinction between the transcendental or objective unity of consciousness and the unity of the individual self; (2) The distinction between content and existence.

(1) Dr. Hicks agrees with Kant in maintaining that there must be a universal and unchanging consciousness rightly distinguishable from the limited and changing consciousness which constitutes the being of individual minds such as yours or mine. By way of personal explanation, I may say at the outset that I am not opposed to the doctrine of a universal consciousness. But I find myself quite unable to accept the Kantian view of it, or the reasons on which this view is founded—even as modified by Dr. Hicks.

In Kant we may distinguish two arguments. The first is implicitly rejected by Dr. Hicks. However this may be, I

must here deal with it in order to clear the ground. What I refer to is the contention that the individual self, being only a fragmentary portion of the known world and, as such, circumscribed by temporal and spatial conditions, cannot know the whole to which it belongs, or itself as a limited part of the whole. In reply, I would urge that apart from perfectly arbitrary and untenable assumptions, what is alleged to be impossible is really quite possible. I would also urge that it is not only possible, but the omnipresent fact. Take first the question of possibility. The fact that the individual mind is part of a whole means that it is connected with the whole and with other parts of the whole. Why should it be assumed that this connexion cannot among other relations take the form of the relation of knower and known? If the individual mind formed no part of the universe—if it existed in completely self-contained isolation—this would indeed abolish all cognitive relation between it and other entities, because it would abolish relations of all kinds between it and other entities. But it is a pure *non-sequitur* to argue that because the individual mind is in relation to other things, and to the universe of which they are part, therefore it cannot be related to other things in the way of knowing them. The truth is that there is a concealed premiss which alone gives the argument any plausibility; and this concealed premiss, when it is brought to light, turns out to be an arbitrary assumption involving a glaring *petitio principii*. The tacit presupposition is that the individual mind is in all essential respects like a material thing and hence that it can have no other relations than those of which a material thing is capable. It is presupposed that states and processes of the individual mind are all intrinsically different from cognitive states and processes; and it is thence inferred that an individual mind cannot know. A *petitio principii* with a vengeance.

Let me have I not missed the real point? The real point, it may be urged, is that an object known cannot itself know.

I would reply, in the first place, by asking what is meant by the term "known object" or object of knowledge?

If it is meant to cover whatever is or can be known, then plainly it is quite wrong to say that an object of knowledge cannot be itself a knowing subject. Otherwise we should know nothing about knowledge and could not even be thinking about it as we are at the present moment.

On the other hand, if the term object of knowledge is taken to apply only to a certain class of things known, which from their special nature cannot themselves be knowers, then it requires to be shown that individual minds are objects in this sense.

In other words, it requires to be shown that individual minds cannot be cognitive subjects. But this is the very point at issue. So that, here again, there is a *petitio principii*.

Again, it may be said the cogency of the argument depends on the timeless nature of cognition, as contrasted with the temporal flow or sequence of states and processes which constitute the mental life of the individual. I admit, of course, that the relation of knower and known is not in its own intrinsic nature a temporal relation; it is not a relation of temporal simultaneity, priority, or subsequence. But that is no reason why knowledge should not develop in time and be subject to temporal vicissitudes. The local relation of my hat to the peg on which it hangs is not itself a temporal relation; it is purely a spatial relation in its own intrinsic nature timeless. None the less, my hat may begin to hang on the peg at a certain moment of time, may continue hanging for a certain period of time, and may afterwards be removed or fall off. This is possible because the hat and the peg are themselves things which endure in time. Again, the relation of interaction is strictly simultaneous and not successive. At the very same time, A is acting on B and being acted on by B, and B is acting on A and being acted on by A. None the less interaction may continue through a period of time. In fact, what is ordinarily

called interaction is really a continuous flow of interactions. This is possible because the things which interact themselves endure and change in time. Similarly, although the cognitive relation is not itself a temporal relation, it may none the less endure and change. It may do so because at least one of its terms, the knowing mind, endures and changes.

There is then no intrinsic impossibility to debar us from ascribing to the individual mind a knowledge of the universe of which it is a part and of itself as part of it. And, as a matter of fact, individual minds do know the universe and themselves as comprehended in it. The life history of each of us is a history of our coming to know what we did not know before, and of ceasing to know what we did know before, both about ourselves and about other things, including other minds as such. Our knowledge belongs to us as individuals. My remembrance that I had a toothache yesterday is not your remembrance of your having a toothache yesterday; it is not even your remembrance that I had a toothache yesterday. My knowing the multiplication table is not your knowing the multiplication table any more than my sitting on a chair is your sitting on a chair. Doubtless it is the same universe which we all know; but each of us knows it from his own individual point of view. Each of us apprehends features of it which escape others and fails to apprehend features which are revealed to others. I do not deny that a problem arises out of this relation between the individual as knower and the universe as known. We may inquire and we ought to inquire how the universe in which such a relation is possible must be constituted. But what is presupposed as the explicandum when we raise the problem is that, in fact, individual minds can and do know both themselves and things other than themselves.

The only knowing with which we are primarily acquainted is knowing on the part of individuals,—of empirical, historical selves. If we did not know ourselves as knowing, the word knowledge would convey no meaning to us whatever. If we

are ultimately led to affirm the being of a cognitive consciousness which is not that of an individual mind, this result can only be reached by inference from the nature of our own cognitive consciousness.

This seems to be the way in which Dr. Hicks himself would justify the doctrine of a universal Subject. While accepting the Kantian doctrine that "the individual mental life is not to be identified with the fundamental unity of consciousness," he rejects the "violent severance between them" made by Kant. He admits that the empirical subject does know other things and itself. He speaks of "the process by which the empirical subject comes to know objects and to know itself as one of them." How then does he reach the view that there is a transcendental consciousness not to be identified with the individual knower? He does so by an argument which is also to be found in Kant, but with a very important difference. What the difference is I shall presently indicate. To begin with, I shall deal with the argument so far as it proceeds on ground common both to Kant and Dr. Hicks. The essential basis of the reasoning is the assumption that the unity of cognition is the ground and precondition of unity in the objects known. Objective relations such as are expressed by the categories are supposed to be derivative from the unity of the knowing subject as their logical prius. This being granted, the next step is to recognise that such a unifying function cannot belong to any individual mind as such. Finite subjects, as Dr. Hicks says, "must find a place not as supremely determining the world of experience but as themselves determined therein." It is not our application of the categories which gives its unity to the world we know; on the contrary, "the categories must be already constituent elements in the objects of perception in order for them to be objects at all" to an empirical consciousness. So far as the individual mind is concerned, "the characteristic feature of the object, its standing over against the apprehending subject, means that its elements are arranged

in a regular, definite, determined manner, according to a fixed order or prescribed rule, so that the individual subject is *compelled, constrained, forced* to conform" to this fixed order or prescribed rule. "The laws of the game are not laid down by him." We have thus two propositions which, taken together, lead irresistibly to a certain conclusion. On the one hand, the unity of the object depends on the unity of consciousness; on the other, the unity of the object does not depend on the unity of the individual consciousness. The inevitable implication is that objective unity must be logically preconditioned by the unity of a consciousness free from the limitations of individual minds. This certainly follows from the premisses; but are the premisses beyond question? One of them may indeed pass unchallenged. Few are likely to maintain that it is the individual mind which furnishes those "principles of universal and necessary validity in virtue of which the world of experience is one systematic whole, the same for all rational beings." The other premiss, however, is in a very different position. It is by no means self-evident that objective unity has its logical prius in the unity of consciousness; and the only argument adduced in its favour turns out, when closely scrutinised, to disprove it rather than to prove it. This argument, it is alleged, is supplied by Kant in his Deduction of the Categories. Now, setting aside a certain assumption made by Kant and rejected by Dr. Hicks, the essential point of the Deduction is as follows:—The unity of the cognitive subject as expressed in the judgment "I think," essentially presupposes unity in the object it cognises. The cognitive subject is one and identical with itself only in so far as it apprehends relation and connexion in what it knows. If we suppose an object, A, to be apprehended without any apprehension of its connexion with B, and if we suppose B to be apprehended without any apprehension of its relation to A, then it cannot be the same conscious subject which apprehends both A and B. The cognition of A and the cognition of B cannot belong to one and the same con-

sciousness ; they must belong to separate individual minds. In general, unity of consciousness presupposes consciousness of unity in the object of consciousness. This part of the Deduction may be regarded as a permanent contribution to Philosophy. But what it demonstrates is the very opposite of what is required to justify the position occupied by Dr. Hicks. What it demonstrates is that objective unity is the logical prius of the unity of consciousness. What requires to be shown from the point of view of Dr. Hicks is the reverse of this ; what requires to be shown is that the unity of consciousness is the logical prius of objective unity. Thus the Deduction is really fatal to this form of Kantianism. The unity of consciousness cannot be the ground of that very unity in the object which is itself an essential precondition of the unity of consciousness.

Kant, of course, did not recognise this. He could not do so on account of a certain assumption which he throughout regarded as unquestionable. Distinguishing between objects as given and objects as thought, he takes it for granted that what is given is, as such, a mere multiplicity without unity. Objectivity consists in a certain fixed and universal order. But that which is arranged in this order is in its own nature orderless. The object as given has in this sense no objectivity : it is merely a disconnected manifold of sense-affections. Hence objective unity must be due to thought, to the faculty of knowing, to the unity of consciousness. Kant's position is logically desperate. He assumes throughout that there is no unity in the object which is not preconditioned by the unity of consciousness. On the other hand, he has demonstrated in the Deduction that this very unity of consciousness has for its essential precondition that objective unity which is supposed to depend on it. One or other of these propositions must be given up. And there can be no doubt which of the two must be surrendered. The argument of the Deduction is irrefragable. The position which we are bound to abandon is that objective unity is merely derivative from the unity of cognitive conscious-

ness. In the analysis of the conditions of the possibility of experience we must recognise as a primary condition that there must be something to be known having a being which does not consist in being known. We must further acknowledge that this being must be a unity of differences, and that the unity is no more dependent on cognitive consciousness than the differences. [This does not debar us from affirming that in the ultimate constitution of the Universe knowing and being are essentially correlated and mutually dependent. Mutual dependence necessarily implies relative independence; what we are asserting is just this relative independence on the side of being.]

We can now understand why Kant denied that an object could be a cognitive subject. His view on this point follows directly from his peculiar doctrine concerning the mode in which objects are constituted. An object is for him a unified multiplicity; but the multiplicity is in itself a mere multiplicity. Its unity is not founded on its own nature, but is imposed on it by something other than itself—"the faculty of knowing." Hence the only relations which it can ever exhibit are external. Even the possibility of these depends on the two subjective forms of sensibility—time and space. Hence there can be no objective connexions which are not merely spatial or temporal. Such connexions as are subsumed under the categories are, indeed, apprehended as necessary and universal. None the less the relations which are cognised as necessary and universal are merely relations of coexistence in space and sequence or simultaneity in time. This holds for the empirical self as well as for material phenomena. The empirical self is nothing but the affections of inner sense apprehended as forming a temporal series. Evidently such an object cannot be a cognitive subject. For the relation of knower and known is not one of sequence or simultaneity. It thus appears that if anyone regards the individual mind as an object of experience and yet holds it to be a cognitive subject, he must mean by

the term *object* something totally different from what Kant meant. It hardly seems too much to say that for Kant an empirical self which could know itself would not be a phenomenon at all, but a thing in itself. This is a view which, with due explanation, I should myself accept. But Dr. Hicks would, I presume, regard it as monstrous. This being so, he ought to determine precisely where he parts company with Kant. In calling the empirical self a phenomenon, he cannot mean what Kant meant. What, then, precisely, does he mean?

We pass now to the second main contention of Dr. Hicks. We have to consider his attempt to sever existence from content.

(2) According to Dr. Hicks, "the contents of knowledge are not existents; existents are not, as such, contents of knowledge." Our first task must be to fix as precisely as possible what he means by this and similar statements. We may begin by distinguishing three possible meanings. In the first place, when it is said that contents are not existents nor existents, as such, contents, the reference may be to contents merely *quâ* contents. Under this restriction, we cannot ascribe to what is known or thought of any predicate which is not essentially constituted by or included in the fact of its being known or thought of. Just as it is untrue that an animal *as such* has four legs, so it is untrue that a content of knowledge is, as such, an existent. But if we drop the reservation contained in the "as such," then there is no reason why an animal should not have four legs or why what has four legs should not be an animal; and, similarly, there is no reason why a content of thought should not be an existent or why an existent should not be a content of thought. Now this proposition, that the existence of what is known is not included in or constituted by the mere fact that it is known, does form part of what Dr. Hicks intends to assert. So far I agree with him. But it is only part of his doctrine—a part which must be carefully distinguished from the rest.

Otherwise, arguments which only prove this may be taken to prove something quite different. The second alternative meaning is that existence cannot be in any way known or thought of. Evidently neither Dr. Hicks nor anyone else can really intend to assert this. None the less his words are sometimes capable of this interpretation, and some of his arguments either prove as much as this or prove nothing. But his real drift is represented in the third meaning which we have to consider; when he denies that existence can be a content, what he is opposing is the view that an existent can be directly apprehended just as it is actually existing at any moment. This language may seem obscure. The truth is that its precise sense can only be determined by its application. It would be impossible to indicate what is meant if what is meant were not discoverable by each of us in our own experience. Dr. Hicks could not know what he is denying if what he is denying were not a fact. Explanation must therefore be based on examples enabling us to point out what we intend to refer to. Consider such modes of cognition as the following: Thinking generally of having a toothache or of someone else having one; remembering that I have had a particular toothache or that someone else has had one; anticipating that I am going to have a toothache or that someone else is going to have one. Now contrast with these cognitions that mode of knowing a toothache which is possible only while the toothache is an actual feeling of the person who knows it. Everyone who is not altogether blinded by metaphysical prejudice must admit that there is a vital difference. And if we are called on to express the difference in language, we can only do so by saying that in the cognition of the toothache, while it is an actual feeling of the person who knows it, there is an element of immediacy which is otherwise absent. In it we are directly acquainted with a particular existent just as it in its particularity exists in the particular moment of its particular existence. Such immediacy is possible only in so far as what is known exists simul-

taneously with the act of cognising it. Nor is it sufficient that the cognition and what is cognised should be simultaneous; they must also be connected in an intimate unity of an altogether unique kind. They must both be partial features of the mental life of the same psychical individual. In the sense in which we are now using the term "immediate," it would seem that no one can be immediately acquainted with anything which does not at the moment form part of his own mental life.

This must not be taken to imply that mental states can be immediately apprehended as being mental or that psychological knowledge is more accurate and less fallible than other knowledge. Such inferences derive whatever plausibility they may possess from a fundamental misconception, which I must now attempt to remove. They seem to be founded on the assumption that those who maintain immediate knowledge in the sense which I have indicated are committed to the view that such immediate knowledge can have being by itself so as to constitute a complete cognition. But this is an entire misapprehension. What is immediately apprehended is apprehended only in its connexion with a context which is not immediately given. Thus even the cognition of a toothache as it is actually being felt cannot be purely immediate. What is true is that there is an element of immediacy in it and that this is indispensably necessary to distinguish it as a perception from mere memory, anticipation, or thought. I am aware, for example, of the toothache as having had a past, and as, unfortunately, about to have a future; so far my thought transcends the given. But the past and future are cognised by me as the particular past and future of a present particular existence which in its present particular existence is in each moment of the process directly apprehended.

When once we have recognised that what is immediately known is known only in inseparable connexion with a related context that is not immediately known, it is easy to see that

the character of the total object depends on the special nature of this context. When the context is of one kind, the total object is psychical ; when it is of another kind, the total object is material. It is far more often material than psychical. When this is the case part at least of the present existence which is immediately given must consist in sensations as actually experienced. The whole distinction between ideas and perceived facts or between hypothesis and verification depends on the presence or absence of actual sensations. To appeal to experience is to appeal to cognition containing a relevant element of immediacy which is not present in our previous knowledge. I see what I take to be a piece of ice and I assume that it is cold and will melt in fire. But I regard this assumption as relatively mediate and inferential as compared with the cognitions obtained by actually touching what I take for ice or actually watching its behaviour in the fire. The reason is that in these cognitions there are relevant elements of immediacy consisting in the direct apprehension of actually existing tactual and visual sensations which are absent from the apprehension of the object as originally seen.

Now if this view is right, a particular existent can as such be part of a content of knowledge so that its particular existence coincides with being known. This is the thesis which I defend and which Dr. Hicks denies. My reasons for defending it are partly contained in the foregoing exposition of what I mean by it. What further arguments I have to adduce in its favour will emerge naturally in dealing with the arguments brought against it by Dr. Hicks.

These we must now proceed to consider—

The first of them would seem to consist in an appeal to Kant's criticism of the ontological argument. Kant's objection to the ontological argument is that existence is never part of the content of any idea whatever. Now Dr. Hicks expresses his own view in the very same words. This seems to have led him to regard the position of Kant as being in reality

similar to his own. But a closer scrutiny will show that in this he is entirely mistaken. What Kant means is the opposite of what he means, and the Kantian argument does not support him, but, on the contrary, conclusively refutes him. When Dr. Hicks affirms that existence is never part of the content of any idea whatever, the distinctive peculiarity of his position lies in the wide application which he gives to the terms "content" and "idea." The "contents of ideas" mean for him in this context the "contents of all modes of conscious apprehension whatever," expressly including *perception*.* But if we give this comprehensive application to the term *content* in the Kantian argument, the result is sheer nonsense. From mere content we cannot by any logical process elicit an existential judgment. Thus if whatever is cognised in any mode of conscious apprehension were in this sense a mere content, it would follow irresistibly that existential judgments are absolutely impossible. The mere thought of there being a hundred dollars in my pocket, apart from any relevant perception, can never justify me in affirming that there are a hundred dollars in my pocket. If all cognitions were in this respect on the same plane with mere thoughts, then no one could ever have the slightest ground for affirming that he had money in his pocket even while he was actually feeling it and rattling it; no one could ever have the slightest ground for affirming that he had a pocket at all or even that he had his trousers on. This is the awful plight to which we should be reduced if Dr. Hicks had his way. Nay, we should be worse off than this. For on the view which he advocates no one could ever have the bare thought of there being coin in his pocket. For if we had no direct acquaintance with any particular existent, how could we ever attain the abstract concept of existence or the problematic thought of there being particular instances of it?

* *Ar. Pr.*, 1904-5, p. 163.

We may approach the question somewhat differently by inquiring how we are enabled to determine in thought this or that particular existence. Whenever we do so in a way which can be adequately expressed in language, it will be found that we always determine one particular existence by assigning its relation to some other particular existence which is assumed to be already known. For instance, when I refer to the present Lord Chancellor, I determine him as the particular Lord Chancellor existing at the time at which I am speaking; when I refer to this table I determine the table as that which is near me or at which I am pointing or as that of which I have just been talking. The application of proper names is determined by the particular occasions on which they have been uttered, *e.g.*, in the baptismal service. And so, quite generally, we can never mark off in language the particular existence we mean except by its relation to some other particular existence presupposed as already known. But this process obviously involves a vicious circle unless there is ultimately some direct apprehension of particular existence which supplies a point of departure for thought. If we attempt to reach this ultimate basis by a regressive process we find ourselves approaching nearer and nearer to our own psychical life as the final centre of reference through which all other particular existence is determined. The limit of this regress is marked by such words as "now" and "I." In such words we indicate a particular existence which is not determined by the thought of relation to some other particular existence, but by the direct apprehension of particular existence just as it is actually existing. For this reason it is impossible without a logical circle to define adequately in language what it is we refer to when we say "now" or "I." This is impossible because we can only express in language the relatively complex cognition, of which immediate apprehension is an element. What is immediately apprehended cannot be so detached as to become by itself a distinct object of knowledge. It is not nameable

except as being an element of a relatively complete object. Thus, if I am right, when the application of words to particular existents is directly determined by immediate experience, it ought to be impossible to explain what is meant without a vicious circle. And as a matter of fact, this is so. Let anyone try to explain what time it is which he refers to when he says "now." It is not enough to say that "now" means the time at which a person is speaking. For persons speak at different times, constituting a great many *nows*, but in saying "now," the reference is to only one particular time. How is this particular time distinguished from the others? It is circular to say that by "now" I mean the "time at which I am now speaking." Yet anything short of this is inadequate. Again, we cannot define the time meant by assigning its relation to past or future time. For the "now" forms the ultimate starting point from which we determine temporal position in the past or future. The future is what follows the "now," and the past is what precedes it. Thus any attempt to determine the meaning of the now merely by its relation to the past or the future involves a vicious circle. The now must be stamped by a peculiar signature of its own—a peculiar character intrinsic to it. What is this peculiar character? We may attempt to express it by saying that the now is the moment of actual experience. We may say that it is the moment in which sensations, pleasures, pains, &c., are not merely being thought but actually existing. But, again, we have to press home the old question. The "now," it is said, is a moment of actual experience. But which moment of actual experience is it? For there are an indefinite multiplicity of these; the mental life of each of us from the cradle to the grave includes an incessant succession of moments of actual experience. How is the particular one which we refer to in saying "now" singled out from the others? Evidently no general conception of actual experience and no mere thought of there being particular instances of actual experience will help us in the least. Mere thought leaves us

moving round in the old circle. The moment of actual experience referred to is the present moment; the "now" is the time of that actual experience which is *now* existing. If there is any way out of this *impasse* except the one I propose, I should be exceedingly glad to know what it is. The only escape that I can discover lies in frankly admitting that there is a direct apprehension of particular existence as it is actually existing. The application of the word "now" is determined, not by any mere thought of it, but by our immediate experiences in the way of sensation, sensuous imagery, pleasure, pain, &c., directly cognised in the moment of their existence as they cannot be cognised at any other moment.

As a result of this discussion we seem justified in affirming that the reasoning with which Kant assails the ontological argument, so far from supporting the thesis of Dr. Hicks, really destroys it. In the sense in which Dr. Hicks uses the term "content" Kant conclusively refutes the view that the particular is not as such a content of knowledge. We must now proceed to examine the only other serious argument which Dr. Hicks brings forward. We may pass over certain references to Lotze which are apparently intended only as illustrations of his meaning and not as proof of the truth of his contention. What then remains is (1) the argument from the timeless nature of the contents of knowledge, (2) that based on the alleged impossibility of a cognitive act cognising itself.

The argument from the timeless nature of the contents of knowledge may be stated as follows: All contents of knowledge are timeless; no existents are timeless; therefore no existents are contents of knowledge. Here we have first to inquire whether contents of knowledge are referred to merely *as such* or without this limitation. If the reference is merely to contents as such, this meaning must, of course, be preserved in the conclusion and not in the major premiss only. But on this assumption the argument does not prove what Dr. Hicks requires to be proved. It does not prove *simpliciter* that

existents cannot be contents of knowledge, but only that if they are so, their existence is different from the fact that their existence is known. On the other hand, if contents are referred to *simpliciter* and not *secundum quid*, the argument appears to prove far too much. It appears to prove, if it proves anything, that no cognition of existence is possible at all. Nor can this *reductio ad absurdum* be evaded by saying that existence is "represented" or "referred to" in the content. Such phrases obviously yield no help unless they mean that existence is in some way cognised. But if they do mean this, their use is a tacit admission that existence is, after all, a content of knowledge.

There must, it would seem, be something wrong with the argument. To discover precisely wherein the fallacy lies, we must inquire why and in what sense the contents of knowledge are timeless. To clear the ground, it may be well to begin by pointing out that from one point of view they are not free from temporal vicissitudes. A content is temporally conditioned inasmuch as it becomes a content, continues to be a content, and ceases to be a content. For example, I may at a certain time begin to think of the multiplication table, I may shortly after cease to think of it, and I may again begin to think of it to-morrow. I name such temporal vicissitude only to set it aside as irrelevant for our purpose. But the reason of its irrelevance ought to be noted. It is irrelevant because it characterises the contents of knowledge merely *as such*; it characterises them merely as known. It does not attach to what is known but to its being known. Dr. Hicks is wrong in affirming that contents *as such* are timeless. On the contrary, contents as such are subject to temporal conditions; they become contents and cease to be contents at certain times. If they can, in any sense, be truly regarded as timeless, it must be from another point of view.

The contents of knowledge can, it would seem, be timeless only in so far as the being which is known is timeless. Now

it is essential to existents that they should have a temporal character, that they should be subject to change. If, then, we assert that contents are timeless does it not follow that existents cannot be cognised?

The conclusion seems, at the first blush, inevitable. But further scrutiny will, I think, show there is a perfectly satisfactory way of escape from it. This is indicated in the saying of Kant, found in his proof of the principle of substance, that only the unchanging changes. The full meaning of the dictum is that, just because in one sense a thing changes, in another sense it cannot change. It cannot change in the sense of losing its identity just because the changes it undergoes are all *its own* changes. Analysis of the nature of change shows that what changes must be identifiable as the same throughout its successive states and relations. Its successive states and the transitions between them must all be included in its identity as partial phases of its total being. Hence, if we consider its total being as a collective unity, comprehending not only its unchanging characteristics but also all its changes, possible and actual, past, present and future, we cannot truly affirm of this total being that it is changeable. We cannot do so for the same reason that we cannot truly affirm that a tree is its leaves; or, to speak more comprehensively, the reason is analogous to that which precludes us from unlocking a box with the same key which is already locked up inside the box.

The application of the Kantian analysis to our present problem becomes evident when we take into account another position also established by Kant. Change taken by itself in isolation, apart from something which changes and, in changing, retains its identity, cannot be an object of cognitive thought or perception. Hence, change can only be a part and never the whole of the content of any cognition having that relative completeness which enables us to express it in language. It follows that a total content cannot be subject to temporal vicissitude. So far we may agree with Dr. Hicks that contents

are necessarily timeless. On the other hand we cannot concede to him that time relations are never even part of a content. On the contrary, it is just because temporal qualifications, so far as they belong to a content at all, can only constitute part of it, that they can never be adjectives of it as a whole. We may take as an illustration that independence of time-vicissitude which characterises the truth or falsity of propositions and by consequence the law of contradiction. A proposition cannot be true at one time and false at another. If it sometimes appears as if this were not so, the appearance is illusory and is due to the fact that the language by which we indicate position in time fluctuates in its meaning according to the occasion on which it is used. Thus, the same verbal formulas embody different statements. In the year 1900, the words "Jones is now a bachelor" may express a true proposition; in the year 1901, the very same words may express a false proposition, Jones having married in the interval. But we do not give a right account of what has taken place if we say that the proposition which was true in 1900 has ceased to be true in 1905. On the contrary, the truth of this proposition is absolutely unaffected by the lapse of time. What looks like a change from truth to falsity is really only a change in the meaning of the word "now" and of the present tense of the verb. The truth stated in the formula "Jones is now a bachelor" as used in 1900 cannot be stated in the same formula in 1905, and it cannot be contradicted by saying in 1905 that "Jones is not now a bachelor." If a person speaking in 1905 wishes to contradict it, he must say: "Jones was not a bachelor at a certain time in 1900." In general, what is true does not become false and what is false does not become true. Wherever there is an appearance of the contrary, what really happens is that a form of speech has changed its meaning because of a shifting of the point of view from which time relations are indicated.

Only by means of such an explanation as this is it possible

to justify the position that truth and falsehood and the law of contradiction are independent of time-vicissitude. But the cogency of the explanation entirely depends on our recognising that time determinations may and do form part of the content of propositions. This is the one essential reason why the total content of propositions must be independent of time-vicissitude. The one essential reason is that whatever reference there may be to time is already included within the proposition we are dealing with, and that consequently this time reference cannot be used over again to qualify the proposition as a whole in its collective unity. I thus reach a conclusion which is sharply opposed to the view maintained by Dr. Hicks. According to him, if all contents are timeless, time-relations cannot be any part of a content. On the contrary, I should say, that if time relations cannot form any part of a content, it is impossible to understand how all contents can be timeless.

We have now to examine the last argument used by Dr. Hicks which is based on the thesis that cognitions cannot cognise themselves or, in his own language, that "the mental states in and through which apprehension of a content on the part of a conscious subject comes about" cannot at the same time be states in and through which they are themselves apprehended. The general drift of his discussion at this point seems to be as follows:—Those who maintain that existents can be directly cognised appeal especially, if not exclusively, to the evidence which is, as they assert, supplied by each man's cognition of his own psychical states. Hence, Dr. Hicks feels it incumbent on him to give separate consideration to this part of the problem in order to show that even the existence of psychical states is not directly apprehended. But he identifies psychical states with states "in and through which" a content is apprehended; and accordingly he takes it for granted that all he is bound to show is that such "acts of apprehension" are not themselves immediately apprehended.

Now it is open to Dr. Hicks, when he is conducting a positive train of reasoning on his own account, to determine the meaning of the words he uses in the way which may seem most convenient and fruitful for his special purpose. But when he is engaged in controversy, it is by no means permissible for him to employ a term of fundamental importance in a sense widely different from that which his opponents attach to it, without carefully taking into account the divergence of usage. Yet he certainly commits this fault in the case of the term "psychical." Psychical states are wholly identified by him with what he calls "acts of apprehension." Now, though there is some difficulty in determining precisely what he means by "an act of apprehension," on no possible interpretation can his meaning be made to agree with that which such terms as "psychical state" bears for those who hold that psychical states are directly cognised just as they at any moment exist. Sometimes he seems to mean by "act of apprehension" a "mechanical condition" which determines the occurrence of a cognition at this or that time in the life history of an individual consciousness. If and so far as this interpretation is correct, his whole discussion is futile and irrelevant. For no advocate of the direct cognition of psychical existence ever intended to apply the term *psychical* to any such "mechanical conditions." On the other hand, if and so far as he means anything else by "act of apprehension," he must, it would seem, mean a cognising itself, considered as an occurrence taking place at this or that time in the process of individual experience. In this sense, no one, I presume, would refuse to recognise that "acts of apprehension" are psychical, so that if Dr. Hicks has succeeded in showing that they are not directly cognised, he has made good a necessary part of his case. Whether he has really succeeded in doing this we shall consider later on. At present I have to point out that his opponents by no means limit the application of the term psychical to cognisings. They also recognise

as psychical existences, pleasures, pains, desires, cravings, emotions, and sensations, and in doing so they expressly distinguish such modes of individual experience from the cognition of them. They do not even hold, or at least they ought not to hold, that the being and nature of these psychical states is wholly constituted by their being known. The *esse* of even a pleasure or pain is not *percipi*. It may be that pleasure or pain cannot exist without some concomitant cognition of it, however vague; but this does not imply either that the pleasure or pain is identical with the cognition of it or that its existence consists in being cognised. As a matter of fact, it is easy to show the relative distinctness of the feeling and the cognition of it. Pleasures and pains vary in intensity in different phases of their existence; but this intensity belongs only to the feelings themselves and not to the cognitive apprehension of them. The correlated cognitions may vary in degree of clearness but not in intensity; indeed, the intensity of the feeling may be at a maximum when the cognition of it is extremely vague. Again, the peculiar difference in quality which distinguishes a pleasant feeling from an unpleasant feeling is not a difference in the quality of cognition—not even of the cognition of the feelings which are pleasant or unpleasant. The different qualities qualify the existent feelings and not the existent cognitions of the feelings.

Now, Dr. Hicks appears to demand that whatever is to be called psychical must either be a cognition in the sense of a cognising, or, at least, must have its nature and existence wholly constituted by its being cognised at the moment in which it is cognised; and because pleasure, pain, &c., do not satisfy this condition, he denies that they are psychical states. We grant that if the term psychical is to be used in this way, they are not psychical. But this does not help his main argument in the least. Whether or not he chooses to call a painful feeling a psychical state, he is, at any rate, bound to show that it is not an existent which is directly cognisable as it

exists. But, instead of grappling with this problem, he merely begs the question. The question is whether such contents of knowledge as a painful feeling are not directly known as they are actually existing. He answers in the negative without assigning any reason except the general dogma that no actual existence can be known in this way, whence, of course, it follows that painful feelings and other analogous experiences either do not exist or that there is no immediate apprehension of their existence. He thus merely reiterates his own fundamental view instead of dealing with the special problem connected with the special group of cases under discussion. It is as if he had laid down the dogma that "All bullies are cowards," and then in reply to an objector referring to instances of men who appeared certainly to be bullies and yet not to be cowards, merely protested, "You must be mistaken, for all bullies are cowards."

His procedure could be justified only on the assumption that the special cases under discussion present for him no peculiar difficulties. It will be therefore advisable, even at the cost of partly repeating myself, to state briefly why I hold that there is direct cognition of what I call *psychical* states, processes, or relations. First I must determine more definitely in what sense I employ the term *psychical*. I call anything *psychical* which belongs to the experience of an individual as an integral part of it. When I call a pain mine, I mean that it is an actual experience existing at a certain time and forming part and parcel of the unified complex of actual experiences constituting my conscious self. I do not mean merely that it is a content of my knowledge. For I know many things, such as chairs, tables and the multiplication table, which are not my experiences. In knowing them I may be said to have experience of them. But that is not the same as their being my experiences. My knowing them is part of my experience, but the things themselves which I know are not. Similarly, I may have cognisance of a pleasure.

which is not my feeling but another's; both the pleasure and the cognition are then psychical states; but the pleasure is the other man's psychical state, not mine, and the cognition is mine and not his. Finally, when I say that a psychical state belongs to an individual experience as part of it, I do not mean that the individual must recognise it as thus forming part of his being. What is essential is that it should actually be owned by him, not that he should know that he owns it. The existence of a self and its own knowledge of itself as a self are not the same.

And now we have to inquire: (1) whether psychical states, so understood, are existents? (2) whether there is any immediate apprehension of their existence on the part of the self to which they belong? That they exist will scarcely be denied. The pain of gout or rheumatism actually begins, ceases, endures and changes. But what actually begins, ceases, endures and changes, must surely be an existent particular. The "mode of reality" belonging to it must be that "mode of reality" we describe as existence and not that "wholly dissimilar" mode of reality "we distinguish as validity or truth."* Dr. Hicks would eclipse the fame of the discoverer of chloroform if he could reduce the reality of a toothache to the reality of validity or Truth. So far as I am concerned, I should not care how true and valid my toothache pains might be, if only they did not *exist*.

The only question, then, which remains, is whether the actual existence of a psychical state can enter as such into the content of knowledge. I say that it can because there is no other way of accounting for the difference between the cognition of it while it is actually existing, and the cognition of it when it is merely remembered, anticipated, or thought of as possible. I know the pain I am at the moment actually feeling in a manner which is essentially different from that in which I know a pain which I am not actually feeling.

* *Ar. Proc.*, 1904-5, p. 162.

In both cases the nature and existence of the pain are thought of and are in this sense contents of knowledge. There seems to be no way of distinguishing between them unless we admit that while the pain is actual the cognition includes some direct apprehension of it as it is actually existing which is not possible when it is not actually existing. Further, it is only on this assumption that we can account for our having any knowledge at all of pain or of any mode of psychical existence having a unique and irreducible nature. How could we have the thought of pain or of there being particular instances of it, if we were not directly acquainted with any particular pain? We certainly could not frame the idea of it by any process of constructive imagination. This argument admits of generalisation. How, we may ask, could we ever have the thought of existence or of there being particular existents, if we were never directly acquainted with any particular existent as such?

It would seem then that psychical existence both can be and is immediately apprehended. There is, however, a peculiar difficulty attaching to cognition and also to other modes in which subjective consciousness is related to its object, as in desiring it or being otherwise interested in it. As regards cognition, the difficulty may be stated thus: The possibility of knowing presupposes an object known distinct from the knowing itself; how, then, can the knowing have itself for its own object? As I have heard Dr. Ward say, you might as well suppose a man to put himself in a basket and carry himself. An adequate treatment of this problem would involve a general discussion of reflexive relations—the relations of things to themselves. But without going so far afield, I shall try to indicate briefly what seems to me to be the true state of the case. In the first place, as a mere matter of abstract logic, there is a fallacy in the argument against the possibility of a cognition cognising itself. No doubt a cognitive act must have a content distinct from itself. But all that this implies is merely that it

cannot itself be the *whole* of its own content. It does not imply that where there is something to be known other than itself, it cannot, in the act of knowing this, also know itself. To take a very rough analogy, the surface of my finger tip cannot merely press itself; it must have something else to press, if it is to press at all. Suppose that it presses the surface of a table; then, in doing so, it also presses itself in the same act. It presses itself against the table by a reflective process. Similarly, I should say that a cognition knows itself against its object by a reflective process. The word reflection supplies the key to the problem.

This is not merely a piece of dialectic concerned only with abstract possibilities. On the contrary, it seems to be an all-pervading fact of ordinary experience that the knowing consciousness is, however indistinctly, aware of itself. In being aware of the object we are aware of it as something known and *co ipso* we are aware of the correlative knowing. This will, I hope, become plain when we consider the processes through which knowledge develops. One and the same total object becomes gradually more fully and determinately known, as questions are progressively answered and anticipations fulfilled or disappointed. Now we are certainly always aware of this process, however little we may mentally define and distinguish it, and it is equally certain that we are aware of it as being what it is, a process in which what is known becomes more fully known. But this implies that we cognise the object as being an object cognised, which again implies that in the same act the cognition of it is cognised.

A similar account may be given of our knowledge of other modes of subjective consciousness. When we desire anything, we are aware of it as desired; it has a qualification which is absent in the case of an object which we do not desire. The cat chasing the bird, apprehends it as object to be pursued and this implies reflective awareness of conation to be part of the cat.

I conclude that the first proposition of Ferrier's *Institutes*

is, in substance, right: "Along with whatever any intelligence knows it must . . . have some cognisance of itself." The cognisance may be very vague; we may hesitate or refuse to call it self-consciousness. But there must always be at least a vague and inarticulate awareness which is continuous with explicit self-consciousness as the seed is continuous with the flower.

REPLY TO DR. STOUT.

By G. Dawes Hicks.

THAT any production of mine should have been the occasion of drawing from Dr. Stout the valuable and suggestive paper with the consideration of which our present session is brought to a close cannot but be gratifying to me. Quite apart from the success or otherwise of the heavy fire he has concentrated upon the position I have been attempting to fortify in various contributions to our *Proceedings*, the paper throws most interesting light upon Dr. Stout's own metaphysical standpoint, and leads to lively anticipation of a new system of philosophy that will carry on the traditional English mode of dealing with the problems of speculative thinking. I know the danger of getting within the range of Dr. Stout's merciless dialectic; but in my misfortune I have the satisfaction of having thus secured for our Society a clearer and fuller view of the ground occupied by our former President.

At present, however, I am on the defensive and can do no more than refer briefly to those parts of Dr. Stout's paper where he is directly attacking what on previous occasions I have tried to support. In one of his recently published letters, Professor Sidgwick remarks that he himself had always learnt from criticism, when he could get himself "into the state of mind of taking a large amount of misunderstanding and misrepresentation as inevitable." What I have learnt from Dr. Stout's criticism it is not now my function to tell: the

"misunderstanding and misrepresentation" I will do what I can to remove.

Before plunging *in medias res*, I may be permitted to put myself right upon two matters which concern not the argument itself but my attitude towards it. The one is this: Dr. Stout starts off by labelling me as one of those persons who make the *Critique of Pure Reason* their Bible, and extract from it whatever doctrine happens to satisfy their own requirements. It is a point of no consequence, but I must respectfully protest that I have no connection with the company alluded to. In the first place, I have absolutely no ulterior "requirement" to satisfy. My sole interest in philosophy is for itself alone; I have no beliefs or convictions that I want to make it an instrument of confirming. And, in the second place, although I certainly do hold Kant for a very great thinker, the significance of whose thought we have as yet by no means succeeded in exhausting, I should find that opinion rudely dispelled if the Kantian writings could legitimately be converted into a gospel of any sort whatsoever. Why may one not be allowed to study a philosophical classic without giving rise to suspicions of this description? The other matter is this: Dr. Stout complains (p. 367) of my unfairness in using, when engaged in controversy, a term of fundamental importance in a sense widely different from that which those whom I am opposing attach to it. And no doubt had I done so his rebuke would be deserved. But in the passage to which he is alluding, I was replying to a criticism made upon a former paper of my own, and according to the very canon Dr. Stout lays down, I was entitled to expect that the critic was using the term in question with the significance I had attached to it, or that if he were not he would have taken into account the divergence of usage.

(1) In dealing with the distinction between the transcendental unity of consciousness and the unity of the individual self, Dr. Stout refers to two arguments, both of which he ascribes to Kant.

Upon what he has to say about the first of these, there is no call for me to dwell, since it is recognised that I have not put myself forward as sponsor for it. I remark only that it surprises me to find it attributed to Kant. Kant certainly did maintain that the human mind cannot comprehend reality in its entirety, but so far as I am aware he never denies "the omnipresent fact" that the individual self can "know the whole to which it belongs, or itself as a limited part of the whole." He raises, it is true, the question, how such knowledge is possible, and comes to the conclusion that its possibility implies the presence of a transcendental unity of consciousness; he argues, no doubt, as though apart from such transcendental unity, the individual mind would be "in all essential respects like a material thing." Both these conclusions may, of course, legitimately enough be contested. But if we are persuaded that in these respects Kant was wrong, we are not entitled to say that he denied an "omnipresent fact." He simply interpreted it in a way which we, in that case, hold to be mistaken. For Kant the individual mind and the "empirical self" had different significations, and it is *not* an "omnipresent fact" that the *empirical* self, in his sense of the term, "can know the whole to which it belongs, or itself as a limited part of the whole." Further, when it is said that "Kant denied that an object could be a cognitive subject," we must, in accordance with the dictum referred to above, remember the limitation which he attached to the term "object." An "object" denoted for him in this context what we may call the centre of reference for sensuous predicates, that which was presented only in the synthesis of apprehension through which there arose the two parallel and distinct fields of experience, outer experience of things in space and inner experience of mental states succeeding one another in time. I do not defend the limitation,—when certain features of Kantian doctrine which I have tried to show reason for rejecting are relinquished it necessarily falls to the ground,—but neither Dr. Stout nor

any other responsible thinker would maintain that cognitive subjects are objects *in this sense*. There is, it seems to me, no occasion to consider whether for Kant a cognitive subject which knows itself is or is not a noumenon; on that point, his teaching, as I understand it, is explicit enough. Nor do I know why Dr. Stout should suppose that the view, *with due explanation*, of the individual mind as a thing in itself will appear to me "monstrous." A "thing in itself" does not, it is true, strike me as a happy expression, and I certainly have no sympathy with the conception of a realm of things in themselves opposed to and causally productive of the world of experience. But I should have imagined that the refusal to recognise a severance between what Kant called the transcendental unity of consciousness and the individual mental life did imply that the cognitive self was a part of ultimate reality, as real and as ultimate as any part can be. And I cannot discover any passage where, in indicating what appears to me to be the true view, I have slipped into "calling the empirical self a phenomenon," although I do not know why the empirical self as apprehended by us should not be so described.

The second argument singled out for summary dismissal is employed by Kant to prove that apprehension of unity in the object presupposes a transcendental unity of consciousness. Dr. Stout brings against it the charge of circularity,—if objective unity is the logical prius of the unity of consciousness, then unity of consciousness cannot be the logical prius of objective unity. "The unity of consciousness cannot be the ground of that very unity in the object which is itself an essential precondition of the unity of consciousness." Notwithstanding Dr. Stout's vigorous polemic, I cannot agree that Kant's position is in the desperate straits he represents. It would be if, instead of logical priority, Kant had been speaking of temporal priority. But in analysing logically a whole which consists of parts, A and B, that mutually involve

each other, it is perfectly legitimate from one point of view to regard A as the precondition of B, and from another point of view to regard B as the precondition of A. In analysing, for instance, the logical relation of Cause and Effect, it is just as true to say that the notion of cause presupposes the notion of effect as that the notion of effect presupposes the notion of cause. Or, to take a more historical illustration, Aristotle does not consider himself debarred from defining virtue as the conduct exemplified by the *φρόνιμος*, because he had previously defined the *φρόνιμος* as the man whose conduct is virtuous. Whenever we attempt to define ultimate connections or first principles in the sphere of knowledge (or in the sphere of morality) there must be an inevitable circle of this kind, but it is not a vicious circle and it in no way affects the validity of the reasoning. Now, Kant's argument is essentially of this nature. He is concerned with the ultimate connections involved in knowledge as such. On the one hand regarding the synthesis in question from the subjective point of view, he proceeds to show that *apprehension* of an object implies conjunction or combination of the several elements therein apprehended, and that such conjunction or combination *as a feature in knowledge*, presupposes the unity of the apprehending self. And on the other hand, regarding the synthesis from the objective point of view, he insists that the self can only become aware of its own unity and identity through the act of combining a manifold, in other words, through opposing to itself an object, an object being no other than a necessary and universal way in which the manifold is combined, and that therefore *synthetic* unity of consciousness presupposes unity in the object *as apprehended*. If Kant were supposing the objective unity which is the precondition of the unity of consciousness to be a unity outside the realm of knowledge, then Dr. Stout's objection would be irrefragable; but that, as I read the "Deduction," is precisely the supposition which he is mainly concerned in refuting.

(2) I pass to my critic's attack upon the distinction* I have tried to maintain between existence and content.

As Dr. Stout's attempt to fix precisely my meaning has resulted in a statement of it, which he admits may seem obscure, and which to me seems ambiguous, I had better here briefly recapitulate what I myself conceive to be the main point of my contention. Taking as an example what is usually described as apprehension of an object through the senses, we may, I have insisted, psychologically distinguish the act or process of apprehending as belonging specifically to the subject, as being a phase or mode of his inner life, from the content apprehended, and again, the content apprehended from the thing or existent reality, of which the content is a manifestation or expression. And I have tried to show that, in this respect, apprehension of the successive phases of the individual's mental life does not differ from apprehension of an external sensible thing, that in it, too, there is a similar distinction between the subject knowing and the content known, and again between the content known and the existent reality of which the content is a manifestation. But, I have urged, this threefold distinction ought not to be taken as a distinction of three existent facts, that on the contrary it justifies us in assuming only two existent facts,—the actual mode or state of the subject apprehending, and the thing or event indicated by or manifested in the content. The content is not a *tertium quid* situate between the apprehending subject and the thing or event apprehended by him; it is *a way in which* the latter is known, a way in which knowledge of the latter is had, and this very characteristic precludes us from regarding it as belonging to the *ordo existendi*. All the phraseology we no doubt vaguely enough apply to it,—“representation,” “manifestation,” “indication of” and the like,—become meaningless, if it be conceived as itself an existing fact.

* Dr. Stout speaks of “severance,” but any attempt at severance I have expressly disclaimed.

With this position, Dr. Stout is, if I understand him rightly, partially, at all events, in accord. He agrees that the "existence of what is known is not included in or constituted by the mere fact that it is known." He agrees, in other words, that there is a distinction to be drawn between content and thing or event apprehended. The existence of the former is not, in his view, identical with the existence of the latter. What constitutes existence on the part of the content is the presence in it of something "immediately given," of "sensations actually experienced." Now, the point here in dispute is not as to the actual fact of sensation, for, although Dr. Stout apparently accuses me of denying it and of attempting to reduce perception to "mere thinking," I repudiate altogether having been guilty of any such absurdity. The point in dispute is whether sensation as "immediately given" forms part of the content before the mind on the occurrence of such sensation. This is what Dr. Stout affirms, and what I call in question. To me it seems that sensation as "immediately given" is an affection of the subject, and does not appear as such in the content apprehended, that what we are immediately aware of through the process of perceiving, which ensues on the occasion of affection, is never the fact of affection itself, but a sense-quality which we discriminate and discern as belonging to the object. Formerly, I used the term "immediate" to denote the relation of the apprehending subject to the *content* apprehended. But I fully admit that there is in sense-perception, as distinct from imagination or thought, an element which we may, if we choose, describe as "immediate" in a different sense. This immediacy, however, appears to me to be an immediacy of relationship to the *real thing* perceived, and not of recognition of the psychical state which is occurring in consequence of the stimulation.

What, now, are the objections which Dr. Stout raises to the position thus briefly sketched?

The first is that there is no way of accounting for the

feature of immediacy, except by assuming that sensation as actually occurring is present in the content, that there is no way of explaining the difference between ideas and perceived facts except by supposing in the latter case "a direct apprehension of actually existing tactual and visual sensations" not present in the former. Well, I have attempted to show, on the other hand, that there is a way of explaining the difference in question without resorting to the hypothesis just mentioned, and to that attempt Dr. Stout makes no allusion, although in one of the papers which he criticises I took occasion to direct attention to it. I must refer those who desire to examine it to a former volume of the *Proceedings*.* Here I will only urge two considerations. In the first place, the problem is not to account for the way in which we come to distinguish a percept from an idea, but to account for the way in which we come to distinguish an idea from a percept. It is not a question of getting at the real world; we are never separated from it; the contents of our acts of apprehension *are* the features we discriminate in the real world; the question is how we come to recognise that a revived content is not necessarily representative of an actually present fact. In the second place, the whole point of my contention is, that just because the contents of sense-perception are not themselves existent things, but ways in which existent things are apprehended, we are acquainted with the latter much more immediately, much more directly (in the true sense of these terms) than we could possibly be if existing sensations stood between us and them.

The second objection is against an appeal I am supposed to have made in support of my position to Kant's criticism of the ontological argument. Although Dr. Stout had started by saying he did not propose to call in question my interpretation of Kant's meaning, he here pronounces as "entirely

* N.S., vol. i, p. 200 *sqq.*

mistaken" an interpretation I am asserted to have put upon a well-known section of the *Critique*. But the alleged interpretation is not mine, and I disown any responsibility for it. In the first place, in the passage to which Dr. Stout refers, I am dealing with an entirely different question from that now before us, with the question, namely, as to the grounds which led Kant to the doctrine of things-in-themselves. In the second place, so far from ignoring that Kant insists on the fact of perception as the justification of an existential judgment, I draw special attention to this vital element in his reasoning, "What (for Kant) an existential proposition really asserts," I write, "is that its subject is given through sense and occupies a determinate place in concrete perceptive experience."* And in the third place, I go on to point out how the assumption of a "given" element in the content led Kant to the very view I am combating, namely, that the content is an existent entity, a *tertium quid*, between the knowing mind and the (for him) unknown realities. Instead of conceiving Kant's position "as being in reality similar" to my own, both here and in my previous paper,† I state in the most explicit way that it is not.

But, it is contended, the Kantian argument when rightly understood conclusively refutes me, and does so by showing that if all cognitions were in respect to this feature of existence on the same plane with "mere thoughts," we should never even attain the abstract concept of existence, since "from mere content we cannot by any logical process elicit an existential judgment." I venture to reply that the alleged refutation begs the whole question at issue; it assumes, without a shadow of proof, that because a content of perception is similar to a content of thought in not being itself an actually existent fact, therefore, perceiving and thinking must

* *Ar. Pr.*, 1901-5, p. 160.

† *Ar. Pr.*, 1902-3, p. 149.

be similar to one another in every other respect, and there can be no difference between them. I can here only repeat that there appears to me to be, (*a*) in the manner in which acts of perception and thought originate, (*b*) usually, so far as our mature experience is concerned, in the characteristics of the contents that result, (*c*) in the feeling-tone that accompanies a percept, and (*d*) in many other criteria, such as that of resistance to bodily movement, an ample supply of differentiating marks, without resort to the hypothesis, which I take to be ill founded. Deplorable indeed is the picture which Dr. Stout paints of a universe framed on what he supposes to be my model. I am inclined to think, however,—and here I may be permitted to digress for a moment from my brief for the defence,—that a universe framed on his model would exhibit more deplorable inconveniences still. If the contents of sense-perception were themselves existent entities, distinct and separate from the external things they are used to qualify, then they would be constantly “fusing” and “coalescing” with the wrong objects. So far as mere sensations go, many other articles might, I presume, give rise to sensuous affections similar in character to those we receive from dollars and pockets and trousers, and I dread to contemplate the chaos that might in consequence supervene. Nay, we should be worse off than this. For, on the view in question, mental images are also existent entities, facts just as real as any sensations. And, *horribile dictu*, there seems no particular reason why they, too, should not “fuse” and “coalesce” with the unfortunate independent not-self! In one of Jerome’s books the story is told of an individual (let us call him X) who, after Christmas festivities, retired to rest in a haunted chamber. Sure enough, at the appropriate hour, the ghost appeared upon the scene, and, at the conclusion of a somewhat blood-stirring conversation, X undertakes to walk part of the way home with his visitor. In the street, a friendly constable accosts X, and puts to him the rather unceremonious question,

"May I ask, sir, what you're a-doing of?" On being informed of his intent, the constable strongly recommends him to say good-bye to his companion and to go back indoors. "Perhaps you are not aware," continues the ruthless official of the law, "that you are walking about with nothing on but a nightshirt and a pair of boots and an opera-hat." X persists that his "trousers are where a man's trousers ought to be—on his legs," but the constable is equally positive that they are not. This is a sample of the awful plight to which we should be reduced if Dr. Stout had his way.

The third objection pressed by Dr. Stout has reference to the timeless character of the contents of apprehension. I am declared to be "wrong in affirming that contents, *as such*, are timeless." In the first place, it is worth while noting that the statement I actually did make was that "any distinct content is, as such, timeless." What I meant by the limitation in this context ought, I should have thought, to have been clear enough. According to the view I was taking, the act of apprehending and the content apprehended, although distinguishable, were not separable: there was no having a content except in and through the act of apprehension itself. I was using, then, the qualification "as such" to indicate that I was for the moment considering the content in abstraction from the act or process, and leaving out of consideration those features of the complex whole that belonged to the act or process. Whilst ostensibly criticising my view, Dr. Stout is here employing the term "content" in exactly the sense I had been trying to show is illegitimate, and it is not to be wondered at that he pronounces my assertion to be "wrong." If, however, we abstract from the fact of knowing, and take the content in itself as that which is known, then what I said of it is true, as such it is timeless. The coming to be and the ceasing to be characterise my acts of knowing, not it: *I* may think of the multiplication table at this moment, *I* may shortly after cease to think of it, and *I* may begin to think of

it to-morrow; but the multiplication table, as such, does not come to be, nor cease to be, nor come to be again.

In the end, I am represented as reaching an extraordinary conclusion indeed. "If all contents are timeless," I am said to have argued, "time-relations cannot be any part of a content." I search in vain to discover any words of mine that could possibly be liable to this amazing misconstruction. In the most explicit way, I guard myself against it by asserting the direct opposite; "time relations," I write, "may, of course, be represented in the content,"* and it is to be remembered that, on the view I am taking, every part of the content is representative. Dr. Stout's exposition of his own view on this subject seems to me of great interest, but I cannot see the relevancy of his criticism of mine.

The last objection to the distinction I have drawn between existence and content concerns the contention that the existence of a mental state is not itself part of the content which in and through that mental state is apprehended. I cannot gather from Dr. Stout's remarks what the reasons are that lead him to find fault with the phrase "an act of apprehension." I used it simply because it seemed to be the most comprehensive term available for indicating the common features of all phases of the inner life, namely, that they are modes in which the mind is active, and that they are modes through which the mind is aware. Certainly, I did not intend to limit the phrase to "cognising" as distinct from feeling or willing, and still less, of course, to the "cognising" we represent to ourselves by introspection as constituting processes of our own mental existence. I was trying to get an expression that would cover not only the more developed, but also the elementary components of mind, and it appeared to me the latter might not inaccurately be described as in their nature acts of apprehension, of which the contents were of varied kinds, either those

* *Ar. Pr.*, 1904-5, p. 163.

that afterwards become sense-presentations and ideas, or those that become feelings (so far as feelings are represented in the form of contents), or those that become motor-presentations and strivings.

I will take, however, Dr. Stout's own term, "cognising." A cognising, according to Dr. Stout, is "an occurrence taking place at this or that time in the process of individual experience." Such a cognising, or "cognitive act," has a content. I select one of Dr. Stout's own examples: "I may have cognisance of a pleasure which is not my feeling, but another's." What, then, is the content of my cognition in this case? One would conclude from what is here said that the content *is* the pleasure as it is actually occurring in the other man's mind, the "other man's psychical state." But, surely, it must be admitted that there is a difference not only between my cognising and the other man's feeling, but also between *what* is before me in my act of cognition and the other man's psychical state. The content of my cognition may altogether misrepresent the other man's psychical state, and under any circumstances cannot do more than very imperfectly represent it. The other man's psychical state, in other words, holds to the content of my cognitive act the relation which the Cartesians described by the term *esse formaliter*. Dr. Stout would eclipse the fame of the whole tribe of thought readers put together if he could show that in cognising another man's pleasure, I penetrate into the other man's being and have his actual psychical state as the content of my cognition.

But, now, in the cognition of my own cognising, what ground is there for holding that this difference between the "formal being" of the actual occurrence and the "objective being" of my representation of it ceases to hold? I have tried to show that there are strong reasons for believing that it *does* hold. In the first place, if it did not, there would be two entirely distinct kinds of cognising,—so fundamentally distinct that it would be an abuse of language to call them by the same name. In the

second place, the nature of what is before us when we cognise our own cognising does not lend countenance to the view that the *esse formaliter* of the cognising enters into the content of our cognition. If it did, there ought to be an accuracy and a certainty attaching to cognition in this case far surpassing anything we can hope for in cognising the objects of material nature, and many writers, at all events, who agree with Dr. Stout on the main issue, do claim for our cognition of our own mental states such superior accuracy and certainty.* Dr. Stout grants that this is a claim which cannot be sustained. The almost insuperable obstacles most people encounter in attempting to introspect their own mental states are, indeed, conclusive evidence against it. "What we do possess (in the way of knowledge of the processes of consciousness) is," as Adamson once put it, "painfully and laboriously attained, and wants every mark of immediacy." Now it can scarcely be seriously maintained that this circumstance occasions no problem for the view I am opposing. If, in every cognitive act, we are aware not only of a content distinct from itself, but also of its own nature, "just as it in its particularity exists," why, then, should there be all this "doubt, hesitation, and pain" in regard to its real character? Sitting in my study, I can recall the summit of the Brocken distinctly enough, and there is no question in my own mind that the content before me is a fairly correct representation of the existent object some hundreds of miles away. But the moment I try to form any idea of the cognitive act by which I do so, although its existence is declared to be for me an immediate object, although I am said to know it "just as it in its particularity exists," and although a thousand such cognitive acts make up the process of

* "Dieses Wissen," writes Volkelt, referring to knowledge of the processes of our own consciousness, "bedarf keiner Begründung oder Rechtfertigung; es knüpft sich an dasselbe keine Schwierigkeit, keine Dunkelheit; es ist ein absolut *selbsterständliches* oder—was dasselbe ist—ein von vornherein absolut *unbezweifelbares* Wissen." (*Erfahrung u. Denken*, p. 29.)

my mental being every day of my life, I am thrown into the greatest perplexity in attempting to say what it is or to give any account of its actual nature. Dr. Stout would get over the difficulty, apparently, by his contention that "what is immediately apprehended is apprehended only in its connexion with a context which is not immediately given." But why should that work so prejudicially in regard to my cognition of my own cognising, and so beneficially in regard to my cognition, for example, of the table on which I am writing? They are in that respect both on the same level—indeed, the balance of advantage ought to lie all on the side of the former, for whilst, according to the theory, I am directly aware of it in its own actual being, I am only immediately cognisant of sensations that reach me from the latter and not of it in its own actual being. In the third place, when we come to examine psychologically such cognition of our own cognising as admittedly is possible for a developed mind, it becomes evident that that cognition is a highly complicated and complex process, and involves the presence of a number of interpreting ideas and thoughts altogether beyond the range of the primitive consciousness. I do not imagine for a moment that Dr. Stout would dispute this; much of what he has written elsewhere would become unintelligible if he did. But such complexity seems altogether irreconcilable with the apparently simple process he here illustrates by his "very rough analogy" (p. 372). The analogy suggests that knowing is to be conceived as a kind of inner vision which is directed upon contents distinct from itself, and which then by a sort of rebound becomes directed upon the source from which it itself emanates. I am convinced that the analogy does injustice to what is really intended, and one can only wait for the adequate treatment of the problem which Dr. Stout half promises. Meanwhile, it may be remarked that the argument against the possibility of a cognitive act cognising itself rests not upon the ground that "a cognitive act must have a content distinct from itself," but upon the ground that the content

arises only through its activity, that such cognitive act is the act of discriminating a content, and that in abstraction from the content it discriminates it has no existence whatever.

The "obscure self reference" which even the most elementary acts of cognition must be assumed to carry with them need not by any means imply that these acts are aware of themselves as acts of cognition. It would be amply accounted for by the circumstance that every act of cognition is accompanied by a certain feeling-tone, which, in contradistinction to the objective significance gradually assigned to the content, comes to be regarded as specifically subjective in character.

And this leads me finally to the question of feeling, upon which throughout the discussion Dr. Stout lays repeated emphasis. I am accused of shirking the problem presented by the "peculiar difficulties" of the special cases of painful feeling. I had no wish, however, to do anything of the kind; and, with reference to the particular point in debate, so far from merely reiterating my own fundamental view, I go on to give specific reasons, not, I submit, wholly beneath notice, for thinking that feeling as an existent psychological state (and, by the way, I have never once hinted that feelings are not psychical states) is not forthwith to be identified with feeling as experienced.

Our knowledge of the conditions under which experiences of pleasure and pain come about is, at present, far too limited to justify any dogmatic assertions as to the precise character of the experiences themselves. But so much as we do know conflicts in no way, so far as I can judge, with the view I am defending. I will take the instance that has served Dr. Stout in such good stead,—that, namely, of the pain of a toothache, whilst it is actually being felt by the person who is aware of it. What can we say about it? A violent disintegration of tissue is, no doubt, occurring in that part of the bodily organism concerned, and, in consequence, certain impulses, it may be through nerve fibres of a special kind, are being transmitted to the brain,

and give rise there probably to an extensive disturbance of the normal working of the nervous mechanism. Just as stimulation of the optic nerve leads to an act of sense-perception, through which we discriminate a particular shade of colour in an external object, so, then, we may conceive the derangement of the normal working of the nervous mechanism gives rise to the particular psychical states through which we are aware of the pain and locate it in the tissue round the root of the tooth. The diseased tissue stands to the pain as felt in a relation, I take it, not unlike that in which the external thing stands to the content in an act of sense-perception. I do not go to the full extent of Dr. Ward's theory that we only know of feeling through the effects it produces in the character and succession of our presentations, but I fail to discover any outrageous absurdity involved in the view that the pain, *as we are aware of it*, is a product of the psychical state undoubtedly present and not that psychical state itself. The argument that if it were so there would be no way of distinguishing an actually felt toothache from a remembered or anticipated toothache seems to me, as in the previous instance, misdirected. The actually felt toothache, according to this mode of regarding it, is the specific product of a specific psychical state; the remembered or anticipated toothache is the product of another and entirely different psychical state. Why, then, should it be assumed that the products must be identical in the two cases?

I will only add two further observations—(a) "Feeling," it has been said, and I presume Dr. Stout would acquiesce in the statement, "gives no information about itself. It is blind, and, like everything else in the world, can only be interpreted by thought." It would follow from the view I am defending that there is no need to assume that feelings are "blind" and "unconscious" before they are apprehended by thought, that a state of pain is itself an act of discrimination and that no additional act of cognition is required to recognise the presence of the pain. So far as I am concerned, I should not care how

much my toothache pains existed, if only I were not *conscious* of them. (b) I should like to guard myself from a possible misconception. I agree with those who place physical pain on a different level from the feeling-tone that is an accompaniment of all our presentations and ideas. Every state of the subject in and through which knowledge is obtained involves, on the one hand, the exercise of an activity by which a content is discriminated and marked out, and, on the other hand, an alteration or change in the total condition of the subject which produces what is appropriately called the feeling-tone of the presentation or idea. But here, again, the feeling-tone as experienced and the psychical change which gives rise to it are not, as it appears to me, identical.

**ABSTRACT OF MINUTES OF THE PROCEEDINGS
OF THE ARISTOTELIAN SOCIETY FOR THE
TWENTY-SEVENTH SESSION.**

November 6th, 1905. The President in the Chair.—The President delivered the opening Address on "Causality and the Logic of History." A discussion was invited by the President, and the following members took part: Messrs. Hodgson, Benecke, Dawes Hicks, Boyce Gibson, Goldsborough, Shearman, Carr, and Nunn. The President replied.

December 4th, 1905. Mr. E. C. Benecke in the Chair.—Professor Boyce Gibson was elected Treasurer in the place of Mr. Boutwood, who had resigned. Mr. Shadworth H. Hodgson read a paper on "Teleology." A discussion followed, in which the Chairman and Messrs. Shearman, Daphne, Finberg, Nunn, Carr, and others took part, and Mr. Hodgson replied.

December 18th, 1905. Dr. G. Dawes Hicks, V.P., in the Chair.—Mr. G. E. Moore read a paper on "The Nature and Reality of Objects of Perception." A discussion followed, in which the Chairman and Messrs. Hodgson, Bertrand Russell, Benecke, Carr, Nunn, and others took part.

January 1st, 1906. The President in the Chair.—Mr. J. Solomon read a paper on "Is the Conception of Good Undefinable?" A discussion followed, in which Messrs. G. E. Moore, S. H. Hodgson, Benecke, Kaibel, Margoliouth, and others took part.

February 5th, 1906. Mr. Shadworth H. Hodgson, V.P., in the Chair.—Mr. T. P. Nunn read a paper on "The Aims and Achievements of Scientific Method." A discussion followed,

in which the Chairman and Messrs. Benecke, Boyce Gibson, Spiller, Goldsbrough, Carr, Finberg, Shearman, Margoliouth, and Dumville took part.

March 5th, 1906. Mr. Shadworth H. Hodgson, V.P., in the Chair.—A paper was read by Mr. F. Tavani on "A Certain Aspect of Reality as Intelligible." A discussion followed, in which the Chairman and Messrs. Boutwood, Carr, Goldsbrough, Shearman, and Dumville took part.

April 2nd, 1906. The President in the Chair.—Dr. F. B. Jevons read a paper on "Timelessness." A discussion followed, in which the President and Messrs. S. H. Hodgson, Benecke, Carr, Shearman, Goldsbrough, Margoliouth, and Dumville took part.

April 18th, 1906. The President in the Chair.—Papers were read by Mr. F. C. S. Schiller, Professor Bernard Bosanquet, and Dr. Hastings Rashdall on "Can Logic Abstract from the Psychological Conditions of Thinking?" A discussion followed, in which the readers of the papers replied to one another, and Messrs. Hodgson, Benecke, Dawes Hicks, and Hoernli also took part.

May 7th, 1906. Mr. Shadworth H. Hodgson, V.P., in the Chair.—Dr. G. Dawes Hicks read a paper on "Sense Presentation and Thought." A discussion followed, in which Messrs. Hodgson, Boyce Gibson, Carr, Shearman, Dumville, Margoliouth, and Goldsbrough took part.

June 11th, 1906. Mr. Shadworth H. Hodgson, V.P., in the Chair.—An amendment to Rule V was moved by Mr. Carr and Dr. Dawes Hicks, and carried unanimously:—

That Rule V be amended to read—"Any person desirous of becoming a Member of the Aristotelian Society shall apply to the Secretary or other Officer of the Society, who shall lay the application before the Executive Committee, and the Executive Committee, if they think fit, shall admit the candidate to membership."

The Report and Financial Statement were adopted.

The officers for the ensuing Session were elected by ballot :— President, Rev. Hastings Rashdall; Vice-Presidents, Dr. G. Dawes Hicks, Mr. G. E. Moore, and Professor W. R. Sorley; Treasurer, Professor W. R. Boyce Gibson; Hon. Secretary, Mr. H. Wildon Carr.

A paper on "Neo-Kantism as Represented by Dr. Dawes Hicks" was received from Professor G. F. Stout. A discussion on the paper was opened by Dr. Dawes Hicks, who replied at length to the arguments of the paper; the Chairman, Professor Boyce Gibson, Messrs. Carr, Benecke, Margolionth, Dumville, Shearman, and Goldsbrough also took part.

REPORT OF THE EXECUTIVE COMMITTEE FOR THE TWENTY-SEVENTH SESSION.

(To be Read at the Meeting on June 11th, 1906.)

TEX Meetings have been held during the Session, and the following Papers have been read:—The Presidential Address: "Causality and the Principles of Historical Evidence," by Dr. Hastings Rashdall; "Teleology," by Mr. Shadworth H. Hodgson; "The Nature and Reality of Objects of Perception," by Mr. G. E. Moore; "Is the Conception of 'Good' Undefinable?" by Mr. J. Solomon; "The Aims and Achievements of Scientific Method," by Mr. T. Percy Nunn; "On a Certain Aspect of Reality as Intelligible," by Mr. F. Tavani; "Timelessness," by Dr. F. B. Jevons; Symposium: "Can Logic Abstract from the Psychological Conditions of Thinking?" by Messrs. F. C. S. Schiller, Bernard Bosanquet, and Hastings Rashdall; "Sense-Presentation and Thought," by Dr. G. Dawes Hicks; and "Neo-Kantism as represented by Dr. Dawes Hicks," by Dr. G. F. Stout. These papers will be published as Volume VI of the "Proceedings."

An interesting feature of the Session has been the revival of the Symposium. Three of our members took part; the subject, which dealt with the pragmatist controversy, was propounded by Mr. Schiller, and replied to by Messrs. Bosanquet and Rashdall.

The Financial Statement shows a balance of £47 8s. 6d., which has been carried to the credit of the Publication Fund. This is larger than usual, and is due to sales of the "Proceedings."

We regret to record the loss by death of two of our members, Dr. Clair J. Grece and Miss E. A. Manning.

Four new members have joined during the Session. It is a matter of regret to the Committee that the number of members does

not increase ; it remains almost the same as in the early days of the Society, before the publication of the "Proceedings." A proposal is being laid before the Society to alter the Rule as to the admission of members. This Rule was framed when the Society held fortnightly meetings and when discussion was the only business. Now that publication has become an increasingly important part of the Society's work, it is proposed to dispense with the formalities of nomination to the Society and subsequent ballot, and to give the Committee power to admit at once to membership such candidates as they approve.

FINANCIAL STATEMENT—27TH SESSION, 1905-1906.

RECEIPTS.		£	s.	d.	EXPENDITURE.		£	s.	d.
Subscriptions (Present Session)	Rent of Rooms—Last Session	..	8	8	0
Arrears	Present Session	..	10	10	0
Sales of "Proceedings" to June 30, 1904	" " "Proceedings," Vol. V	..	45	13	2
" " " " to June 30, 1905	Printing Cards, Proofs of Papers, &c.	..	10	7	0
" " " " " "	Postage and Sundries	4	9	2
					Balance carried to Publication Fund	..	47	8	6
							<u>£126</u>	<u>15</u>	<u>10</u>
							<u>£126</u>	<u>15</u>	<u>10</u>

PUBLICATION FUND.

[illegible]

Examined and found correct—

(Signed)	W. R. BOYCE GIBSON, <i>Treasurer,</i>	(Signed)	F. KAIBEL, GILES F. GOLDSBROUGH	} <i>Auditors.</i>

RULES OF THE ARISTOTELIAN SOCIETY.

NAME.

I.—This Society shall be called "THE ARISTOTELIAN SOCIETY FOR THE SYSTEMATIC STUDY OF PHILOSOPHY," or, for a short title, "THE ARISTOTELIAN SOCIETY."

OBJECTS.

II.—The object of this Society shall be the systematic study of Philosophy; 1st, as to its historic development; 2nd, as to its methods and problems.

CONSTITUTION.

III.—This Society shall consist of a President, Vice-Presidents, a Treasurer, a Secretary, and Members. The Officers shall constitute an Executive Committee. Every Ex-President shall be a Vice-President.

SUBSCRIPTION.

IV.—The annual subscription shall be one guinea, due at the first meeting in each session.

ADMISSION OF MEMBERS.

V.—Any person desirous of becoming a member of the ARISTOTELIAN SOCIETY shall apply to the Secretary or other officer of the Society, who shall lay the application before the Executive Committee, and the Executive Committee, if they think fit, shall admit the candidate to membership.

CORRESPONDING MEMBERS.

VI.—Foreigners may be elected as corresponding members of the Society. They shall be nominated by the Executive Committee, and notice having been given at one ordinary meeting, their nomination shall be voted upon at the next meeting, when two-thirds of the votes cast shall be required for their election. Corresponding members shall not be liable to the annual subscription, and shall not vote.

ELECTION OF OFFICERS.

VII.—The President, three Vice-Presidents, Treasurer, and Secretary shall be elected by ballot at the last meeting in each session. Should a vacancy occur at any other time, the Society shall ballot at the earliest meeting to fill such vacancy, notice having been given to all the members.

SESSIONS AND MEETINGS.

VIII.—The ordinary meetings of the Society shall be on the first Monday in every month from November to June, unless otherwise ordered by the Committee. Such a course shall constitute a session. Special meetings may be ordered by resolution of the Society or shall be called by the President whenever requested in writing by four or more members.

BUSINESS OF SESSIONS.

IX.—At the last meeting in each session the Executive Committee shall report and the Treasurer shall make a financial statement, and present his accounts audited by two members appointed by the Society at a previous meeting.

BUSINESS OF MEETINGS.

X.—Except at the first meeting in each session, when the President or a Vice-President shall deliver an address, the study of Philosophy in both departments shall be pursued by means of discussion, so that every member may take an active part in the work of the Society.

PROCEEDINGS.

XI.—The Executive Committee are entrusted with the care of publishing or providing for the publication of a selection of the papers read each session before the Society.

BUSINESS RESOLUTIONS.

XII.—No resolution affecting the general conduct of the Society and not already provided for by Rule XIV shall be put unless notice has been given and the resolution read at the previous meeting, and unless a quorum of five members be present.

VISITORS.

XIII.—Visitors may be introduced to the meetings by members.

AMENDMENTS.

XIV.—Notices to amend these rules shall be in writing and must be signed by two members. Amendments must be announced at an ordinary meeting, and notice having been given to all the members, they shall be voted upon at the next ordinary meeting. when they shall not be carried unless two-thirds of the votes cast are in their favour.

LIST OF OFFICERS AND MEMBERS FOR THE TWENTY-EIGHTH SESSION, 1906-1907.

PRESIDENT.

REV. HASTINGS RASHDALL, M.A., D.C.L.

VICE-PRESIDENTS.

SHADWORTH H. HODGSON, M.A., LL.D. (President, 1880 to 1894).

BERNARD BOSANQUET, M.A., LL.D. (President, 1894 to 1898).

G. F. STOUT, M.A., LL.D. (President, 1899 to 1904).

G. DAWES HICKS, M.A., Ph.D.

G. E. MOORE, M.A.

W. R. SORLEY, M.A., LL.D.

TREASURER.

W. R. BOYCE GIBSON, M.A.

HONORARY SECRETARY.

H. WILDON CARR, 22, Albemarle Street, W.

HONORARY AND CORRESPONDING MEMBERS.

Elected.

1885. Prof. SAMUEL ALEXANDER, M.A., 13, Clifton Avenue, Fallowfield, Manchester (elected hon. member 1902).

1899. Prof. J. MARK BALDWIN, Princetown, New Jersey.

1899. J. M. CATTELL, M.A., Ph.D., Garrison, New York.

1880. Prof. W. R. DUNSTAN, M.A., F.R.S., 30, Thurloe Square, S.W. (elected hon. member 1900).

1891. M. H. DZIEWICKI, 11, Pijarska, Cracow, Austria.

1891. Hon. WILLIAM T. HARRIS, LL.D., Washington, United States.

1883. Prof. WILLIAM JAMES, M.D., Cambridge, Mass., United States.

1869. EDMUND MONTGOMERY, LL.D., Liendo Plantation, Hempstead, Texas.

1880. Prof. A. SENIER, M.D., Ph.D., Gurthard, Galway (elected hon. member 1902).

1859. Prof. E. B. TITCHENER, Cornell University, United States.

MEMBERS.

Elected.

1898. Miss DOROTHEA BEALE, Ladies' College, Cheltenham.
 1893. E. C. BENCKE, 182, Denmark Hill, S.E.
 1888. H. W. BLUNT, M.A., 183, Woodstock Road, Oxford.
 1886. Prof. BERNARD BOSANQUET, M.A., LL.D., *Vice-President*, The Heath Cottage, Oxshott.
 1890. A. BOUTWOOD, Bledlow, Bucks.
 1889. Prof. J. BROUGH, LL.M., University College, Aberystwyth.
 1895. Mrs. SOPHIE BRYANT, D.Sc., 6, Eldon Road, Hampstead.
 1883. Prof. S. H. BUTCHER, M.A., 6, Tavistock Square, W.C.
 1906. Prof. A. CALDECOTT, D.D., M.A., King's College, London.
 1906. Miss H. M. CAMERON, B.A., 1, Ingleby Road, Holloway, N.
 1881. H. WILDON CARR, *Hon. Sec.*, Savile Club, 107, Piccadilly, W.
 1895. STANTON COIT, Ph.D., 30, Hyde Park Gate, S.W.
 1884. P. DAPHNE, LL.B., 9, Roseleigh Avenue, Highbury.
 1898. E. T. DIXON, M.A., Ruckells, Hythe, Hants.
 1899. J. A. J. DREWETT, M.A., Wadham College, Oxford.
 1906. B. DUMVILLE, M.A., 1, Foulden Road, Stoke Newington, N.
 1893. W. H. FAIRBROTHER, M.A., Lincoln College, Oxford.
 1901. A. J. FINBERG, 21, Hildrop Crescent, Camden Road, N.
 1897. Prof. W. R. BOYCE GIBSON, M.A., *Treasurer*, 9, Briardale Gardens, Platt's Lane, Hampstead.
 1900. G. F. GOLDSBOROUGH, M.D., Church Side, Herne Hill, S.E.
 1905. Miss C. C. GRAVESON, The Training College, New Cross, S.E.
 1901. Mrs. HERZFELD, Sesame Club, Dover Street, W.
 1890. Prof. G. DAWES HICKS, M.A., Ph.D., *Vice-President*, 9, Cranmer Road, Cambridge.
 1902. MRS. S. HICKS, 9, Cranmer Road, Cambridge.
 1890. SHADWORTH H. HODGSON, M.A., LL.D., *Vice-President*, 45, Conduit Street, W.
 1896. Miss L. M. JACKSON, 29, Manchester Street, W.
 1904. F. B. JEVONS, M.A., Litt.D., Bishop Hatfield's Hall, Durham.
 1892. Miss E. E. CONSTANCE JONES, Girton College, Cambridge.
 1896. FREDERICK KAIBEL, 27, Kensington Mansions, Earl's Court, S.W.
 1881. A. F. LAKE, Wrangaton, Sundridge Avenue, Bromley.
 1898. Prof. ROBERT LATTA, M.A., D.Phil., The College, Glasgow.
 1897. Rev. JAMES LINDSAY, M.A., D.D., Springhill Terrace, Kilmarnock, N.B.
 1906. Rev. G. MARGOLIORTH, British Museum, W.C.
 1899. J. LEWIS MCINTYRE, D.Sc., Rosslynlee, Cults, N.B.
 1880. R. E. MITCHESON, M.A., 11, Kensington Square, W.
 1896. G. E. MOORE, M.A., *Vice-President*, 11, Buccleugh Place, Edinburgh.

Elected.

1900. Rev. G. E. NEWSOM, M.A., King's College, London.
 1900. R. G. NISBET, M.A., 102, Albert Road, Crosshill, Glasgow.
 1904. T. PERCY NUNN, M.A., B.Sc., 5, Lichfield Road, Orickwood, N.W.
1903. Miss E. A. PEARSON, 129, Kennington Road, S.E.
1903. GEORGE CLAUDE RANKIN, M.A., 2, Mitre Court Buildings, Temple, E.C.
 1889. Rev. HASTINGS RASHDALL, M.A., D.C.L., *President*, 18, Longwall, Oxford.
1895. ARTHUR ROBINSON, M.A., 4, Pimlico, Durham.
 1896. Hon. B. A. W. RUSSELL, M.A., Lower Copse, Bagley Wood, Oxford.
1905. F. C. S. SCHILLER, M.A., D.Sc., Corp. Chr. Coll., Oxford.
 1897. Lady SCHWANN, 4, Princes Gardens, S.W.
 1892. ALEXANDER F. SHAND, M.A., 1, Edwardes Place, Kensington, W.
 1901. A. T. SHEARMAN, M.A., 67, Cranfield Road, Brockley, S.E.
 1905. J. SOLOMON, M.A., 75, Holland Road, Kensington, W.
 1900. Prof. W. R. SORLEY, M.A., LL.D., *Vice-President*, St. Giles, Chesterton Lane, Cambridge.
1901. GUSTAV SPILLER, Spandauer Strasse 40, Schmargendorf, Berlin.
 1888. G. JOHNSTONE STONEY, M.A., D.Sc., F.R.S., 30, Ledbury Road, Bayswater, W.
 1887. Prof. G. F. STOUT, M.A., LL.D., *Vice-President*, Craigard, St. Andrews, N.B.
1893. HENRY STURT, M.A., 5, Park Terrace, Oxford.
1904. FR. TAVANI, 72, Carlton Vale, N.W.
1900. Prof. C. B. UPTON, M.A., St. George's, Littlemore, near Oxford.
1886. FRAMJEE R. VICAJEE, High Court of Judicature, Bombay.
1902. JOSEPH WALKER, Pellarcroft, Thongsbridge, Huddersfield.
 1890. CLEMENT C. J. WEBB, M.A., Holywell Ford, Oxford.
 1896. Prof. R. M. WENLEY, M.A., D.Sc., East Madison Street, Ann Arbor, Mich., U.S.A.
 1897. EDWARD WESTERMARK, Ph.D.







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